

THE MILLING WORLD

AND

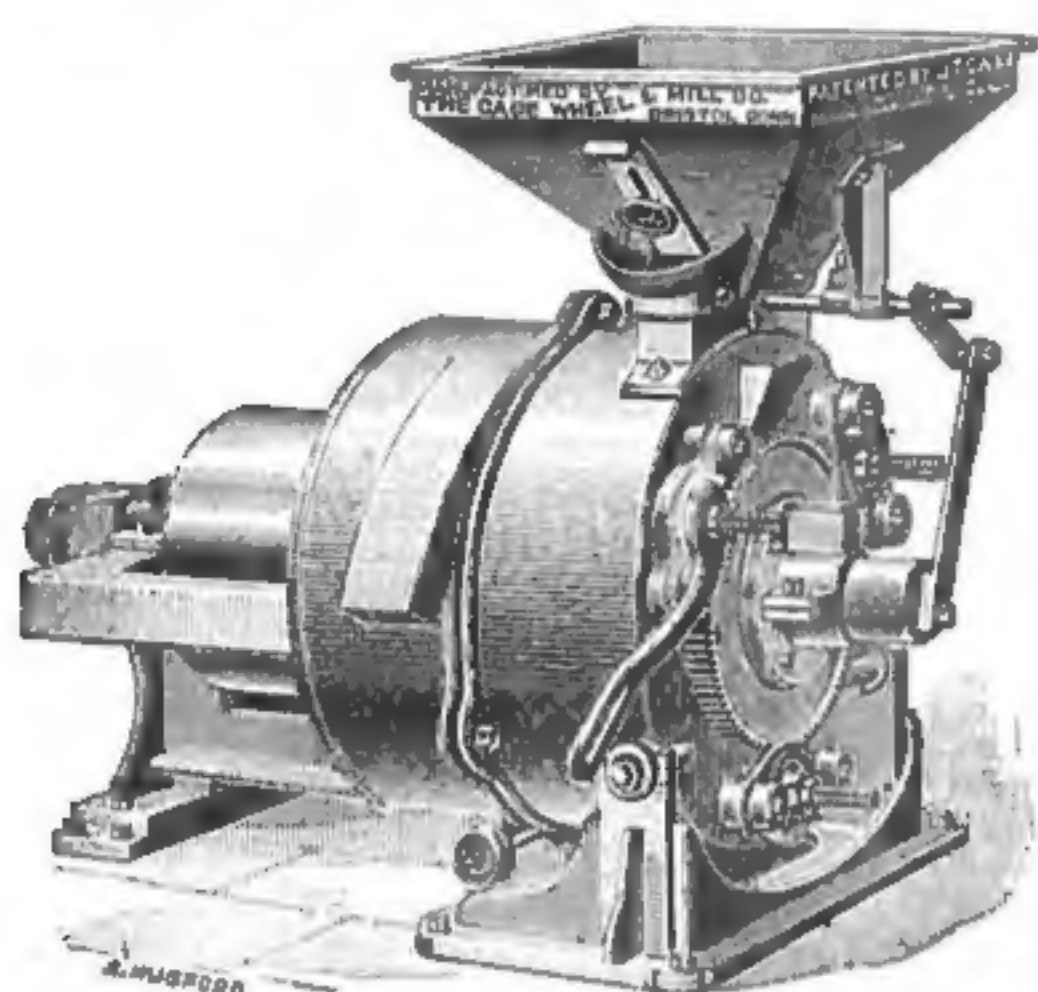
CHRONICLE OF THE GRAIN AND FLOUR TRADE

PUBLISHED EVERY MONDAY MORNING.

VOL. XIX. No 23.

BUFFALO, N. Y., FEBRUARY 4, 1889.

\$1.50 PER YEAR.



VICTORY OVER ALL OTHERS. SINGLE & DOUBLE VERTICAL GRINDING MILLS.

(J. T. CASE'S PATENT.)

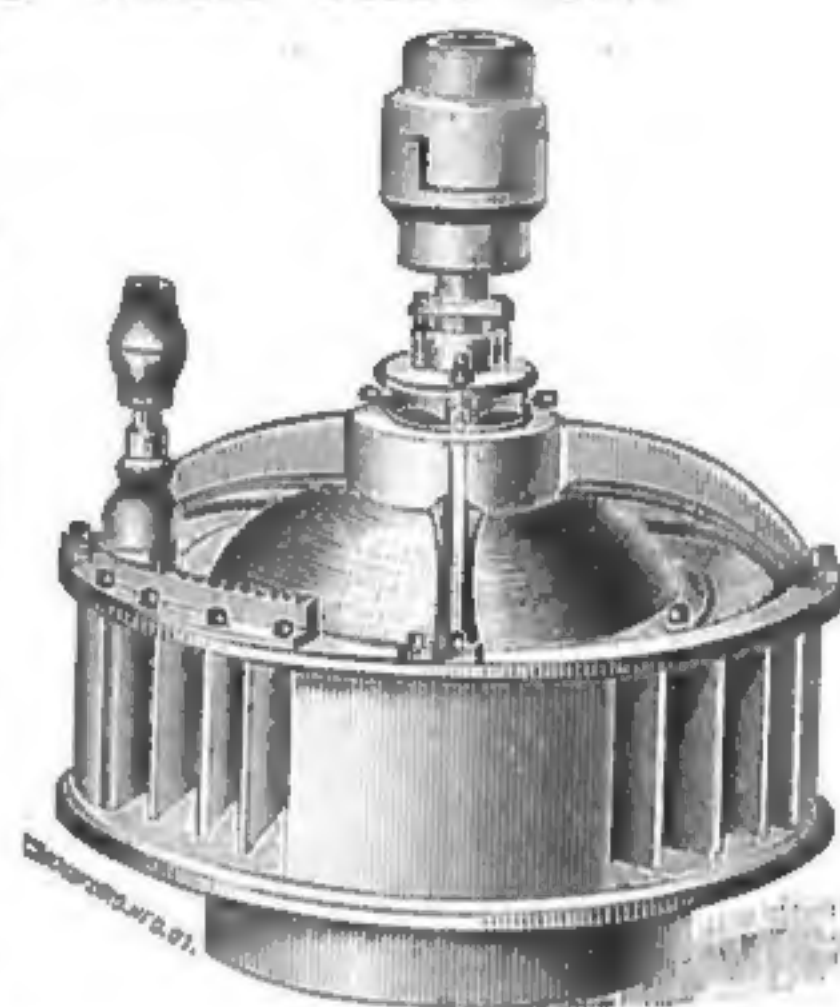
FACTS ARE MIGHTIER THAN ASSERTIONS. READ WHAT THEY SAY:

"Our 20-inch mill made by the Case Wheel & Mill Co. is in every respect satisfactory, easy to handle, and best results obtained of any mill in the country, with same quantity coal and power."—A. S. RUSSELL & Co., Meriden, Conn.
 "Superior to any mill in use."—Geo. WESTON, Bristol, Conn.
 "The best satisfaction in quantity and quality."—CHILD'S ELEVATOR, Manchester, Ct.
 "We take pleasure in recommending it."—GARLAND LINCOLN & Co., Worcester, Mass.

SEND FOR CATALOGUE—ILLUSTRATED AND DESCRIPTIVE.

The Improved National Turbine Water Wheel

The Best for Economy; The Best for Durability; The Best for Power. ONE THOUSAND FIVE HUNDRED NATIONAL WATER WHEELS IN USE Prove that our Assertions are Supported by the Leading Manufacturers in the Country. Send for illustrated catalogue and prices to the manufacturers.



The Case Wheel & Mill Co., Bristol, Conn.

NOTICE.

The J. B. ALLFREE CO., INDIANAPOLIS, IND., wish to inform their milling friends and the trade in general that they are prepared to build and equip throughout mills of any capacity in a style that can not be excelled. Bolting Cloth Trade a Specialty.

COMPLETE OUTFITS

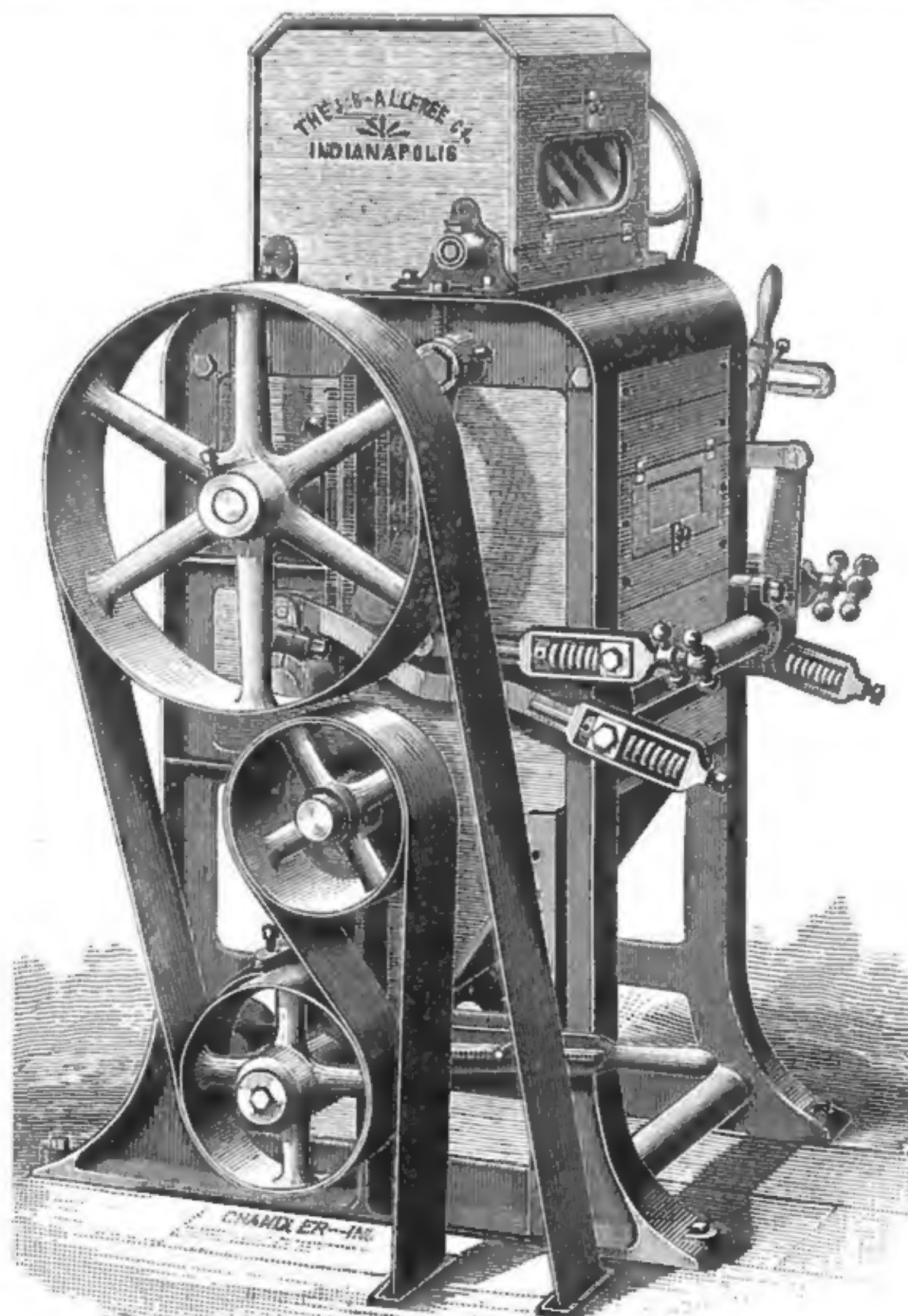
—FOR—

CORN-MEAL

—FURNISHED AT—

LOW PRICES.

Millers interested in Hominy and Germless Goods will do well to get prices from us on the Keystone Huller and Pearler.



—WE MANUFACTURE—

AUTOMATIC ENGINES.

The Keystone Four Roller Wheat Mill.
 The Keystone Four High Corn Mill.
 The Success Bolter and Dresser.
 The J. B. Allfree Purifier.
 The J. B. Allfree Sieve Scalper.
 The J. B. Allfree Co.'s New Bolting Chest.
 The J. B. Allfree Centrifugal Reel.
 The Climax Bran Duster.
 The Allfree Flour Packer.
 The Keystone Huller and Pearler.

ADDRESS FOR ILLUSTRATED DESCRIPTIVE CATALOGUE,

The J. B. Allfree Co., Indianapolis, Ind.

RIGHT TO THE POINT

"The best laid plans o' mice and men
Gang aft aglea."
But the Case Mill gets there every time,
So all the millers say.



"WE PUT IN A CASE SHORT SYSTEM MILL."

Old father Wise, with twinkling eyes,
Points backward to the well-filled till,
While Thrifty scans the new made plans
To double up the CASE SHORT MILL.



"WE DIDN'T!"

Old Shiftless weeps—the sick cat sleeps,
Doolittle has gone out to pray,
The spiders fill the empty till,
While hungry rats now hold full sway.

JUST TAKE A LOOK AT WHAT THIS MAN WRITES:

THE CASE MFG. CO., COLUMBUS, OHIO.

Gentlemen: Enclosed please find settlement in full of my account. The 4-break mill works splendid and am well pleased with it. The Inter-Elevator Flour Dressers are everything you represent, both in capacity and excellence of work. The Special Purifiers are a fine machine and far ahead of the Purifiers you put in my other mill in '83. Am especially pleased with the millwright work. It is well planned and finished in a good, workmanlike manner. I can not praise your millwright and his work too highly.

Yours resp'y,

ELYRIA, OHIO, OCT. 10, 1888.

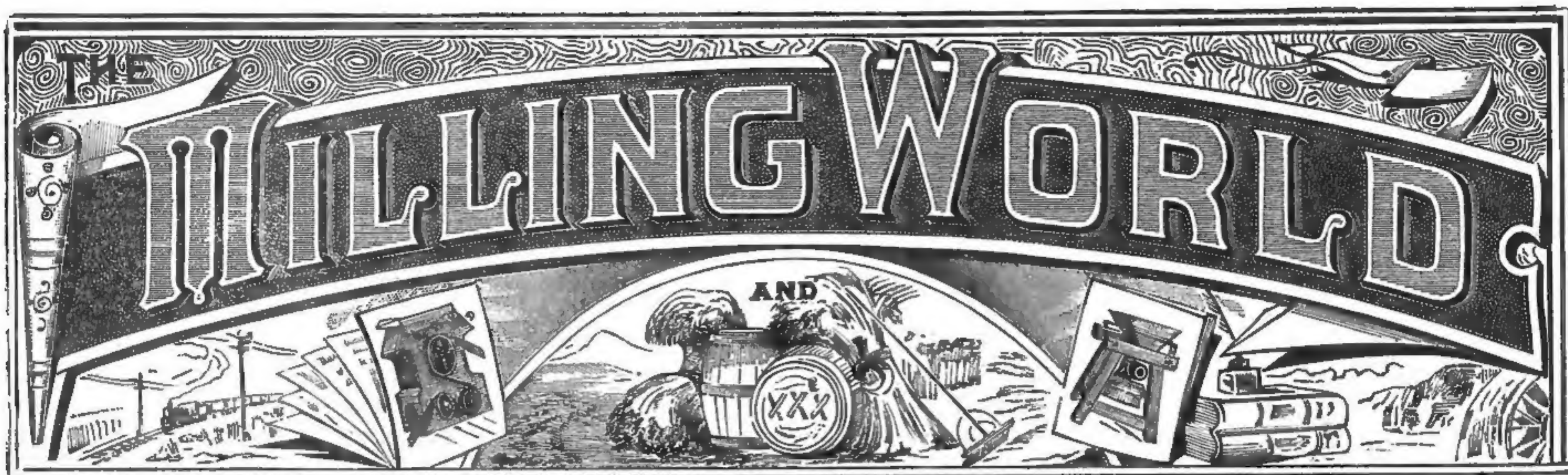
GARRET REUBLIN.

If you want a successful mill write us. Long System Mills remodeled on short notice. Case Short Break Corrugations put on any make of rolls. Our Roller Corn Mills are a most profitable investment. Now is the time to put one in your mill. Our Aspirator and Purifier for Corn Meal will astonish you. Belting, Gearing, Elevator Supplies, Silk and Wire Cloths shipped promptly on receipt of order. If you want mill supplies of any kind write us. Estimates on mills of any desired capacity furnished on short notice. Write us at once and state the capacity wanted and number of grades of flour you wish to make. The Automatic Feed on our machines makes them superior to all others. Catalogues and Circulars Mailed on Application.

RE-DRESSING ANY MAKE OF ROLLS PROMPTLY A SPECIALTY.

THE CASE MANUFG. CO., COLUMBUS, OHIO.

PLEASE MENTION "THE MILLING WORLD."



PUBLISHED EVERY MONDAY MORNING

VOL. XIX. No. 23.

BUFFALO, N. Y., FEBRUARY 4, 1889.

\$1.50 PER YEAR

ATTENTION is called to the new advertisement of Mr. J. H. Peters, of Coleman, Michigan, which appears in another column. His specialty is new improved patent head-linings, which millers and flour-handlers will find particularly interesting. Read his advertisement and address him for circulars and price-lists.

AMONG the new advertisements in this number of THE MILLING WORLD is that of the Lippold Manufacturing Company, of Erie, Pa., to which special attention is directed. The specialty of this house is the Lippold dustless corn sheller and dustless cleaner combined. Address them for price-lists and illustrated circulars.

MILL-BUILDING shows few signs of abating. In every part of the country reports indicate that the year 1889 will see many new mills built and many old ones rebuilt, enlarged and modernized. Complaints by mill builders and furnishers are neither so loud nor so numerous as they were two years ago, although there is reason to believe that over-competition and unwise underbidding still prevail to an injurious degree. On the whole the trade seems to be in fair condition. Some houses that were once conspicuous are less conspicuous now, but as the fittest survive and are equal to all the demands of the trade, the disappearance of the old fogies and the inefficient will cause no disturbance.

CERTAIN cotemporaries are making merry over Statistician Dodge's increase of 1,336,138 acres in the total wheat acreage of 1888. As some of those cotemporaries have unquestioningly swallowed Prognosticator Prime's preposterous imprognosticating prognostications on the crop of 1888, they should not be afraid of a small increase in the estimate of acreage. Statistician Dodge probably does as well as any man could do in the position which he occupies, and certainly his forecasts of the wheat crop of 1888 was much nearer the real thing than those of any other forecaster, except, probably, THE MILLING WORLD. Our forecast was all right up to the frosts of August 14 and 16, and that cold snap laid us out with all the other prophets. At that date, as the result shows, we were 100,000,000 bushels nearer to the crop actually growing than one or more of the prognosticators who make the loudest pretensions to accuracy and infallibility.

ACCORDING to the report of the Agricultural Bureau the American wheat crop of 1888 is 414,868,000 measured bushels. The millers claim that the wheat is short $1\frac{1}{2}$ pounds in weight to the bushel, which is equivalent to 10,371,700 bushels, reducing the milling capacity of the crop to 404,496,300 bushels. The requirements of the country for seed and food are set down at 330,000,000 bushels. That would leave about 74,496,000 bushels available for export, without encroaching on reserves. Up to January 1 about 50,000,000 bushels had been exported, leaving, 24,496,000 bushels beyond reserves available. But it is now so late in the season that supplies are arriving from the countries south of the equator, and it may be difficult to find foreign market for our small surplus, to say nothing of the reserves, which in

case of demand would be readily drawn upon for supplies because of the favorable outlook for the American wheat crop of 1889. In the event of a real demand, it would surprise the world to see what a quantity of wheat the United States could and would "shake out" between this date and the first of next July.

ANNOUNCEMENT is made every day, in every possible way and form, by every writer and orator who touches the subject, that the wheat crop of the United States in 1888 was a practical failure, being both short in quantity and deficient in quality. How do the facts square with that statement? During the last six months of 1888 the United States exported wheat grain and flour equal to 50,000,000 bushels, against 67,000,000 bushels for the same months in 1887 and 78,000,000 bushels in 1886, both those years yielding average crops of high-grade wheat. Certainly that is not a wholly discouraging showing so far as quantity is regarded. How about quality? American flour in London, Glasgow and Liverpool market quotations stands at the head in price, outranking all others. That single fact seems to indicate that, if the American flour is deficient in quality, other flours must be still more deficient, so that, comparatively, the American flour still leads. Does it not seem to our croakers that it is about time to let up on croaking and let our stores of wheat go out in natural channels and in natural ways? Enough damage has been done by pretending to be destitute of wheat while at the same time we are sending out a quantity that would be a "great" and a "magnificent" crop in many single important wheat-growing countries. Call in the bulls and bears, and give the markets a chance to right themselves.

THE Minneapolis "Speculator's Own," which pretends to be the only milling journal in the land and which is really the one journal in the land of no earthly consequence to the miller, is getting "done up" brown by the real milling journals for its insanely false assertion that it originated the Milwaukee meeting and that, therefore, all the milling journals gave that meeting a "slap." So far as the published utterances of the real milling journals go, they all favored the meeting, aided in calling attention to it, commented favorably on all its doings that allowed favorable comment, and criticised freely its weaknesses and failures. It was a meeting talked to death by windy gabblers who require a whole week to introduce a five-line resolution, and its effects upon the price of wheat, the price of flour, the output of the American mills, the stocks of flour on hand, the export movement of grain and flour and the other important features of the milling trade have been practically nothing. In face of all that, the bumptious Minneapolis quacks have the effrontery to call it a success due entirely to *their* efforts! Minnesota ozone appears to have a dreadful effect on egotism, causing it to run frothing, shrieking, raving mad, as in the case of the bumptious editor of the Minneapolis "Speculator's Own." The puerile pranks and bombastic self-inflation of that particular editor are enough to bring a derisive smile to the face of a wooden cigar Indian.

The Canton Cabinet Filing Case Company, Canton, Ohio,

MANUFACTURERS OF

The New Buckeye Document Case & Letter File; Also All Kinds Office Furniture

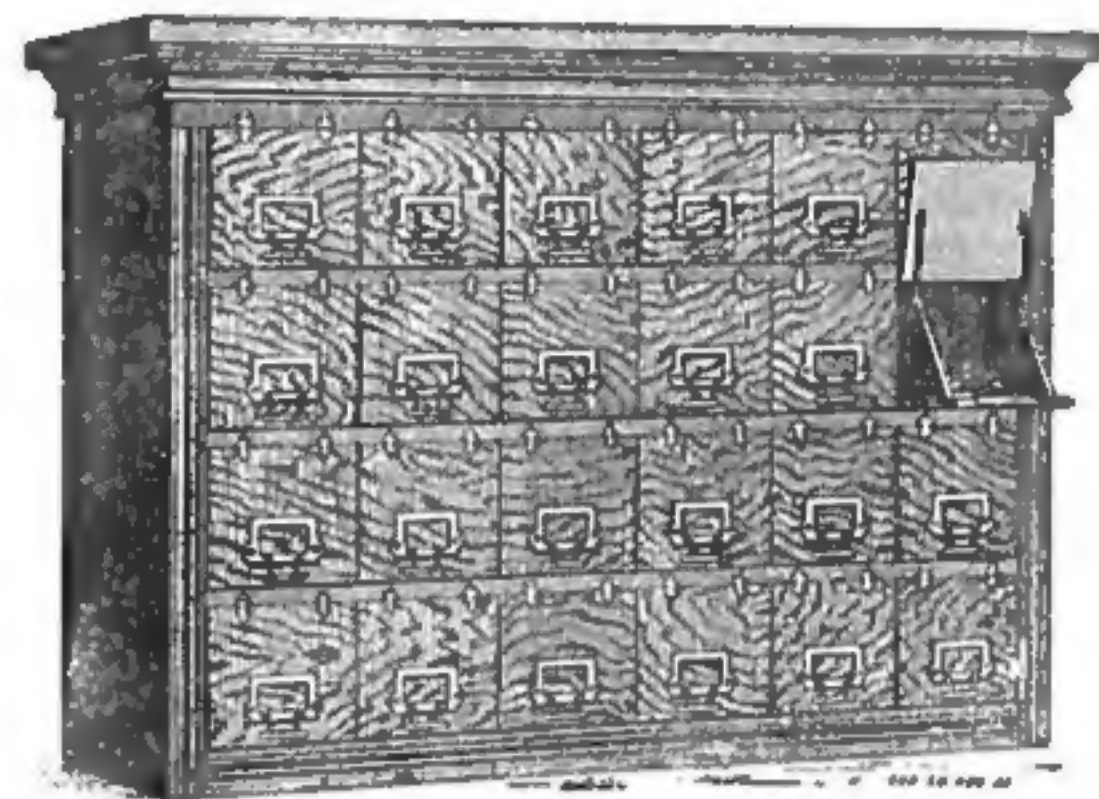


NO. 8 Represents one side of one of our Revolving Cabinet Letter Files and Document Cases Combined. It contains 80 Document Drawers and 8 Letter File Drawers. In filing letters we use first VOWEL of name on front of drawer, and LETTER FOLLOWING first VOWEL on Index Sheet within drawer. We also make more exhaustive systems which contain from 6 to 100 or more Filing Drawers.

NO. 1 Represents one of our small Document Cabinets, for use on desks or brackets. Action of drawer can be seen in the cut. When front is raised inner drawer comes forward, exposing contents of drawer for inspection.

Our Cabinet Files are Conceded to be the Most Convenient of Any in the Market. They are Compact, Simple, Complete, Durable and Ornamental.

SEND FOR PRICE LIST AND CATALOGUE.



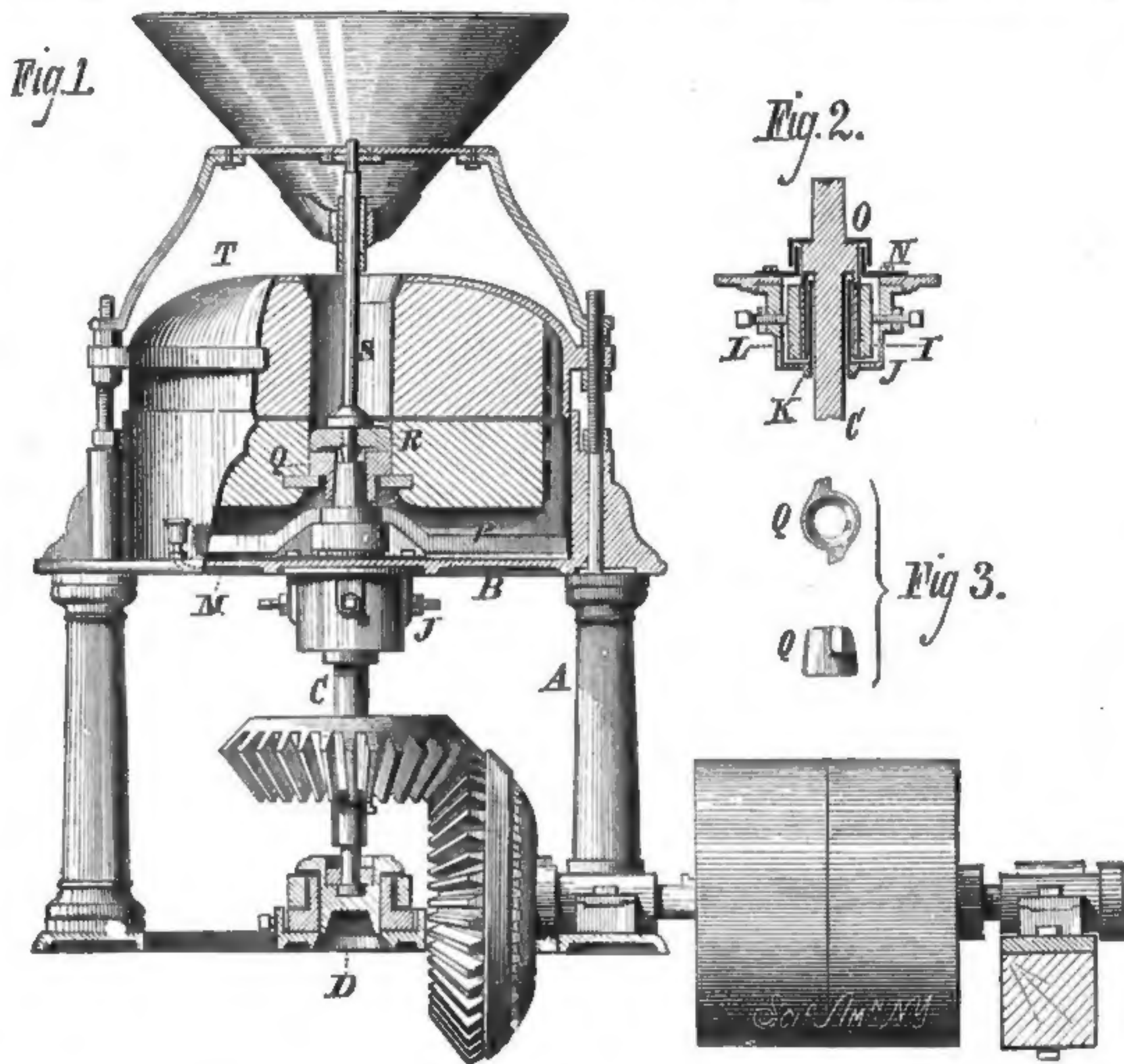
NO. 1.

MUNSON'S PORTABLE MILLS

With all of the Latest Improvements. Indorsed by the Best Mechanical Experts and Engineers. Every mill warranted; Every mill fully inspected: Every mill placed on its merits; Satisfaction guaranteed. Thousands in use; Best of references given.

IN USE BY THE LARGEST CORN GRINDERS IN THE WORLD.

MUNSON'S PATENT SPINDLE.
MUNSON'S PATENT EYE.
 IMPROVED BUSH AND COLLAR,
 CURBS, SILENT FEEDERS, ETC. ETC.



DOUBLE GEARED WITH COUNTER-SHAFT,
 Tight and Loose Pulleys,
 BEVEL SHELL WHEEL & PINION.
 Write Us for Prices and Discounts.

Munson Brothers, Utica, N. Y.

C. H. BIRD & CO., KALAMAZOO, MICH.

MANUFACTURERS OF PATENT

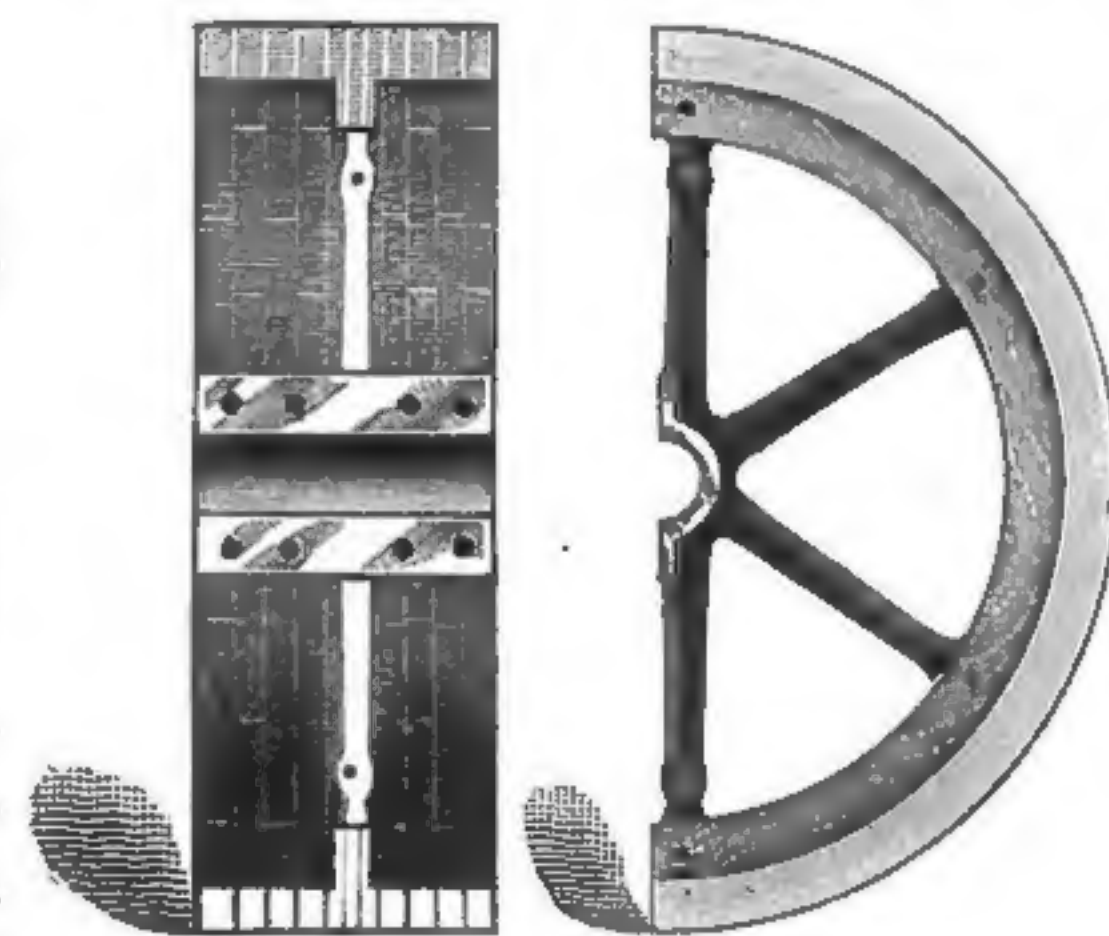
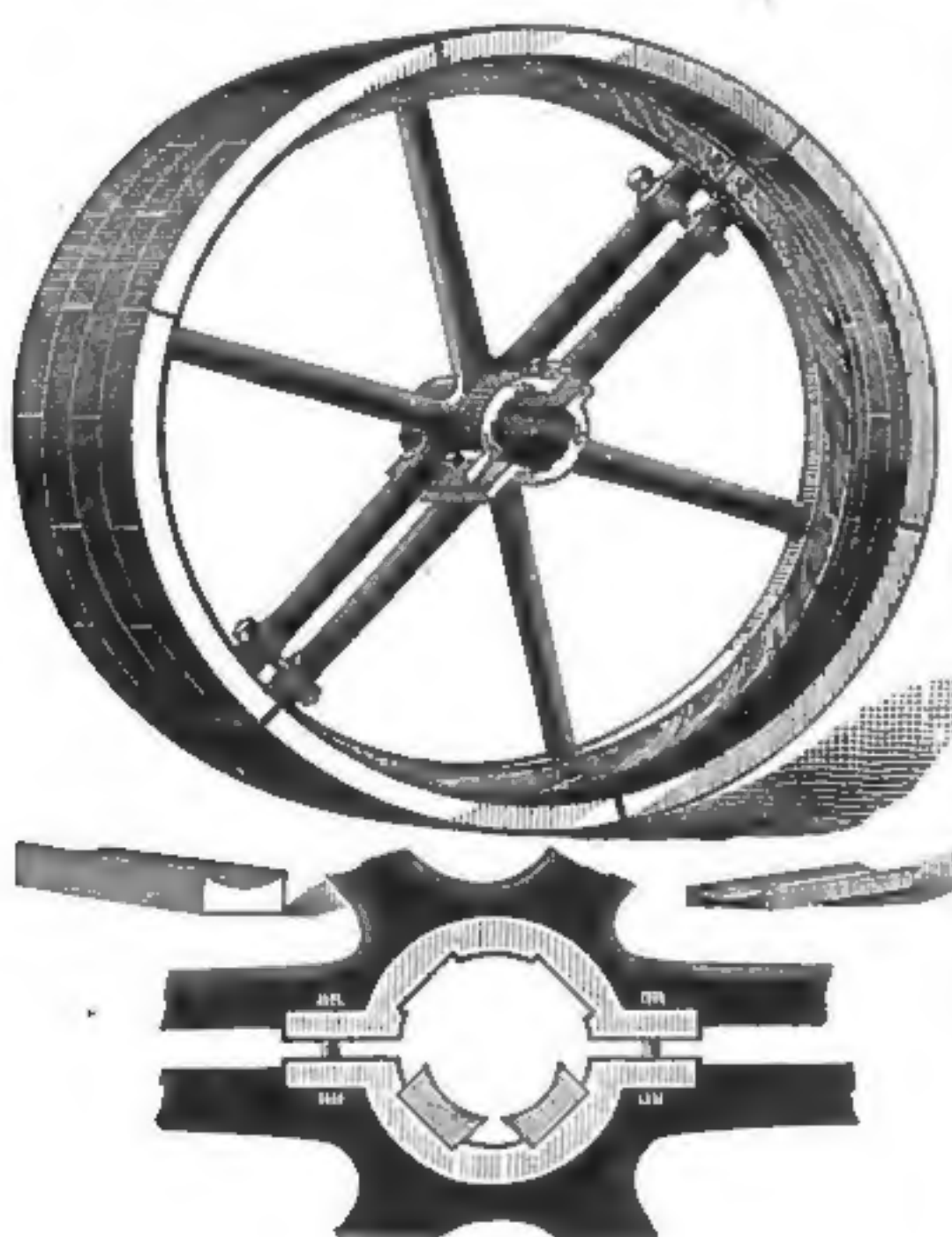
Wood Split Pulleys

WOOD RIM WITH IRON ARMS.

The Best Pulley on Earth!

Is very easily and quickly adjusted to Shaft. Has Patent Iron Bushings Interchangeable, to Fit Different Diameters of Shafts. Has FOUR or SIX Bearings on Shaft. This fastening never slips. Every Pulley strongly built and perfectly balanced.

SEND FOR CATALOGUE AND PRICE LIST.



MILLING WORLD

AND
CHRONICLE OF THE GRAIN AND FLOUR TRADE

PUBLISHED EVERY MONDAY. OFFICES: { Corner Pearl and Seneca Streets,
Over Bank of Attica.
McFAUL & NOLAN, - - - PROPRIETORS.
THOMAS MC FAUL. JAMES NOLAN.

SUBSCRIPTION.

In the United States and Canada, postage prepaid, \$1.50 Per Year, in advance; remit by Postal Order, Registered Letter, or New York Exchange. Currency in unregistered letter at sender's risk.

To all Foreign Countries embraced in the General Postal Union, \$3.25 Per Year, in advance.

Subscribers can have the mailing address of their paper changed as often as they desire. Send both old and new addresses. Those who fail to receive their papers promptly will please notify at once.

ADVERTISING.

Rates for ordinary advertising made known on application.

Advertisements of Mills for Sale or to Rent; Partners, Help or Situation Wanted, or of a similar character One cent per word each insertion, or where four consecutive insertions are ordered at once, the charge will be Three cents per word. No advertisement taken for less than 25 cents. Cash must accompany all orders for advertisements of this class.

Orders for new advertisements should reach this office on Friday morning, to insure immediate insertion. Changes for current advertisements should be sent so as to reach this office on Saturday morning.

EDITOR'S ANNOUNCEMENTS.

Correspondence is invited from millers and millwrights on any subject pertaining to any branch of milling or the grain and flour trades.

Correspondents must give their full name and address, not necessarily for publication, but as a guarantee of good faith.

This paper has no connection with a millfurnishing house and aims to represent the trade without prejudice, fear or favor.

Address all communications

THE MILLING WORLD,
BUFFALO, N. Y.

Entered at the Post Office, at Buffalo, N. Y., as mail matter of second-class.

SITUATIONS WANTED.

Advertisements under this head, 25 cents each insertion for 25 words, and 1 cent for each additional word. Cash with order. Four consecutive insertions will be given for the price of three.

SITUATION WANTED.

By a practical miller; either stone or rolls; twenty-five years' experience. Will work on salary. Would rent a good mill or buy an interest in a good mill. Can give the best references as first-class. M. V. STRAIT, Howard, N. Y. 2225

SPECIAL ADVERTISEMENTS.

Advertisements of Mills for Sale or Rent, Partners Wanted, Machines for Sale or Exchange, etc., etc., cost 1 cent per word, for one insertion, or 3 cents per word for four insertions. No order taken for less than 25 cents for one insertion, or 50 cents for four insertions. Cash must accompany the order. When replies are ordered sent care of this office, 10 cents must be added to pay postage.

FOR SALE AT A BARGAIN.

A good 100-barrel roller mill in Western New York. Good reasons for selling. For particulars address, "E," care of MILLING WORLD, Buffalo, N. Y. 2226

FLOUR MILL FOR SALE.

Water power custom and merchant mill; 2-run 4½-feet buhrs, well fitted up; doing large business; 52 miles from New York; close to depot; good reasons for selling. JOHN ORR, Mountainville, Orange county, N. Y. 2225

SAFE BUSINESS INVESTMENT.

A party owning flouring mill, with modern most approved machinery, doing large, profitable, local and merchant business, well established, located in growing city, population 12,000, Western New York, desires to associate more active capital. Correspondence solicited. Address, BOX 787, Waukesha, Wis. 18tf

FOR SALE.

- 10 Single Sets 9x30 Stevens Rolls.
- 3 Single Sets 7x12 Ferriers Rolls.
- 2 Centrifugal Reels.
- 2 No. 8 Niagara Bran Dusters.
- 2 No. 3 Prinz Dust Collectors.
- 1 No. 4 Hunter Purifier.
- 1 No. 6 Garden City Purifier.
- 1 No. 1 Pyne Purifier.
- 1 No. 8 Richmond Brush Machine.
- 1 No. 2 Silver Creek Scourer.
- 1 No. 00 Becker Brush Machine, over 50 Run Millstones all sizes, all complete.

Above Machines are in first-class condition and practically as good as new. Address J. B. DUTTON, 115 E. Fort Street, Detroit. 18tf



If you are desirous of obtaining the best Mill or Cob Crusher, send for our catalogue and be convinced that our's fill the bill. Can not fail to please you. They are guaranteed to prove as represented.

C. C. PHILLIPS,
OFFICE, 20 SOUTH BROAD STREET,
PHILADELPHIA, PA.

MILL MACHINERY FOR SALE.

- One 24-Inch Portable Mill, wood frame, capacity 15 to 20 bushels per hour; new, best make.
- One 20-Inch Portable Mill, iron frame, capacity 12 to 16 bushels per hour; new, best make.
- One No. 0 Standard Combined Separator, Smutter and Brush Machine; new, best make.
- One 18-Inch Vertical Portable Mill, French Buhr Stone, hung on horizontal shaft; capacity 25 to 40 bushels per hour; new, best make.
- One 14-Inch Vertical Feed Mill; best make, new, a bargain.
- One No. 6 Dustless Separator; new, a bargain.
- Two No. 4 Scientific Grinding Mills, capacity 40 to 50 bushels per hour; new.
- A Lot of Elevator Buckets, brand new, best make, any size desired, very cheap.
- One No. 1 Full Rigged Combined Dustless Separator; new, a bargain.
- Four Corn Cob Crushers, right or left hand, driven from above or below, best make; capacity 40 to 60 bushels per hour.

For particulars address, FRANK SMITH, care of THE MILLING WORLD, Buffalo, N. Y. 5tf

FOR SALE.

Three-run mill, repaired, and a first-rate dwelling house, built last summer. I don't owe one dollar, but will sell cheap for cash, to build a mill in Forest county. Address J. S. PORTER, Lamartine, Clarion county, Pa. 2225

AGENTS WANTED.

Active resident agents wanted in every locality, rare offer, not whole time required, money made easily. Samples, &c., free. Send reference with application. RELIANCE OIL & GREASE CO., Cleveland, O. 1922

It is not a little confusing as well as amusing to read in European journals, notably French and British journals, that "the Russian wheat is even better than the American wheat," and then in the same journals to read that the markets that are just now bursting with that same Russian grain "are but poorly provided with good grain, most samples being only second and third grade." The howness of the thenceness is not always easily visible, audible or tangible.

NOTWITHSTANDING the shortages of wheat everywhere, the importing nations appear to have no trouble in getting all the grain they need. It is thought now that the exportable surplus of the United States crop of 1888 will be nearly 100,000,000 bushels. Yet here it is, held back, with the southern hemisphere harvesting its wheat and getting ready to send to the importers enough wheat to carry them to the northern hemisphere harvest. How much longer will it pay to hold it? What will it be worth in June and July next in case Europe has average crops? Are not the American wheat dealers just a little slow in understanding that in these days the whole world is but one market and one consumer?

MINNEAPOLIS millers have for a long time been a law and gospel unto themselves, and once again they are proving that what controls the rest of the world controls not the millers of Minneapolis. It is reported that some of the giant millers of that town, who were supposed to be in the syndicate agreeing to decrease production, are not really shortening their output at all. Suppose it to be true. What of it? It is not easy to see wherein a shortening of production and an agreement not to consign will affect the milling interest favorably. The Minneapolis millers have wheat. They have a large market which no sane man could ask them to let go begging. Their consignments abroad have been in the main profitable. If they quit consignments to Europe their market there will simply be lost to them and gained by the makers of inferior flour elsewhere. Probably there may be good reasons to suppose that withdrawal from a market and surrendering that market to competitors will in the end secure it for those who withdraw and surrender, but up to date those reasons have been carefully concealed. The Minneapolis millers have doubtless arrived at the correct conclusion that competition in markets that draw from the whole world can not be successful unless they stay right in the strife and push with their competitors. We rather think this decreased output business is beginning to assume the form and features of a fifth-rate humbug, even to those who originated it. So far nothing seems to have been accomplished by it, except that it gives a pretext for more pleasant meetings, more fine banquets and more pointless, beginningless, endless round-and-round-and-over-the-same-ground-a-million-times oratory by several capacious and leaky mouths.

IMPROVED CORN SHELLER AND CLEANER.

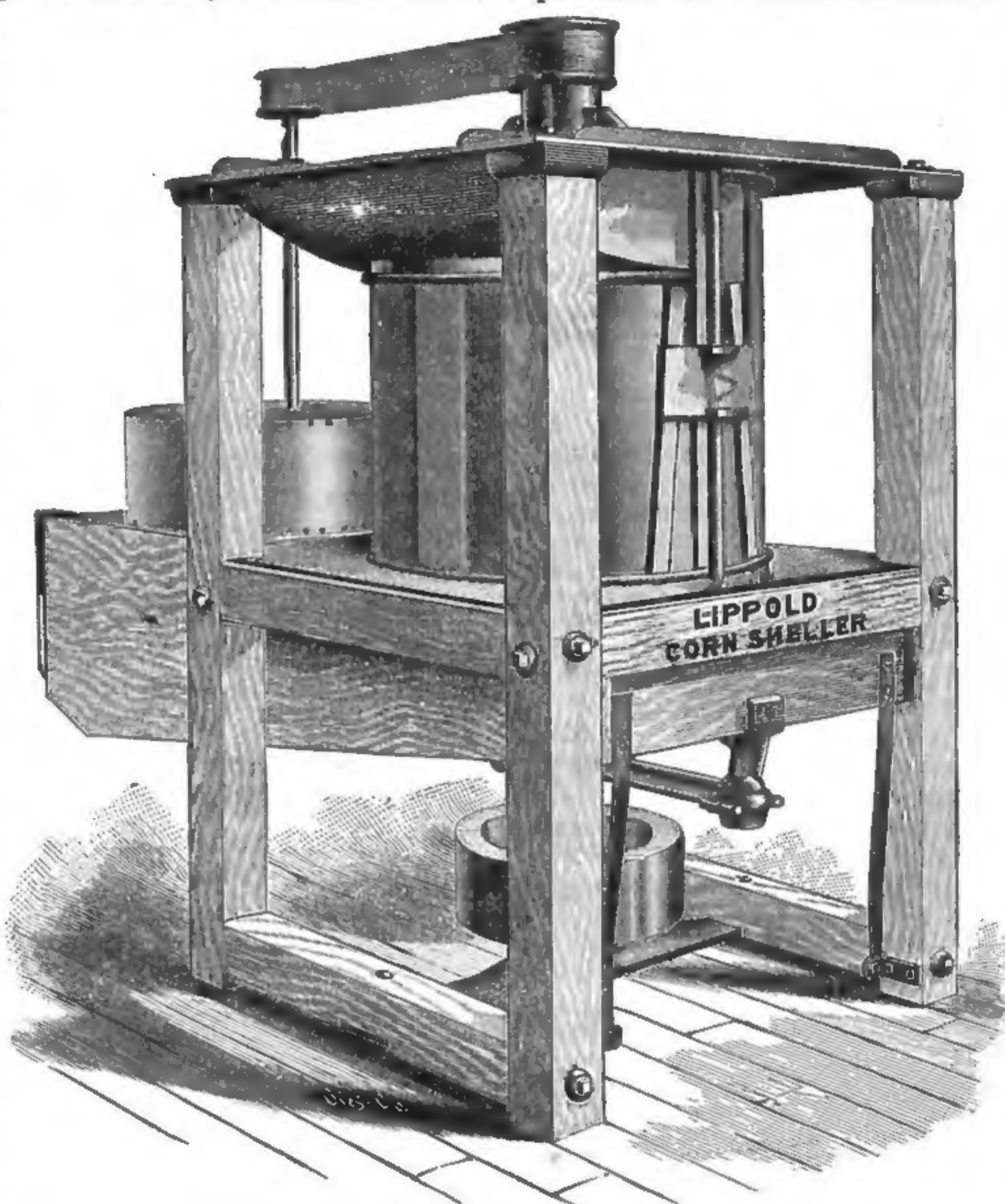
Herewith we present an illustration of the "Lippold" corn-sheller and dustless cleaner made by The Lippold Manufacturing Company, of Erie, Pa. Particular attention is called to these machines on account of their excellence for mill and elevator use. They are remarkable in respect to their great capacity compared with other machines, and the fact that they will shell and clean unhusked corn with the same speed and efficiency as they do husked corn. This last feature is new and will be greatly appreciated in the south, where corn is gathered with the husks on; and we believe it will ultimately result in the western farmers gathering their corn with the husks on. The Lippold Manufacturing Company make two classes of machines, one for mill and elevator use and the other for field or farmers' use. Their mill and elevator machines they furnish with cleaners or without, as ordered. Their machines are made in the same style as the best milling machinery. Their combined shellers and cleaners are perfectly dustless, and, when ordered, they make the shellers dustless. They make three sizes of machines, which they designate as No. 1, No. 2 and No. 3. Their No. 1 machine has a capacity of from 200 to 300 bushels per hour, according to the quality and condition of the corn, and this machine, which is of sufficient capacity for all ordinary custom mills, occupies no more space, requires no more power and costs no more than many low-capacity machines of other builds. It is of immense advantage to have a machine which will do the work quickly, even where there is not much to do and where this can be obtained at low cost. Every miller wanting a machine will be quick to secure it. The "Lippold" No. 2 and No. 3 machines are especially desirable in elevators and large mills, for they have an immense capacity, greater in fact than is claimed for any other machines on the market. The No. 2 machine, it is claimed, will shell and perfectly clean, ready for the cars, from 400 to 500 bushels per hour, while the No. 3 machine will about double that high figure. Such high capacity will enable the user to shell and clean corn ready for shipping as fast as it can be got into the building from wagons. The No. 3 machine will dispose of a wagon-load of corn before the wagon can be got off of the dump and another wagon be got in place ready to dump. It will be well worth while for mill and elevator owners to investigate the claims of these machines. The builders offer their machines on fair trial and no sale if not satisfactory, so that users of this class of machinery can easily demonstrate whether these machines are all that they are said to be. The builders of these machines advertise in our columns. Take their address and write for illustrated circulars and prices.

ADVERTISING AMERICAN CORN.

According to report the Produce Exchange of New York city has under consideration a plan for a special exhibit by the New York Exchange and the produce exchanges of the United States at the Paris exposition, designed to show the possible preparations of corn for the purposes of food and its application in the arts and industries. It is thought that an exhibition of American corn products could be made

which would attract wide-spread interest and stimulate a demand for many classes of exports from this country. The national importance of securing a large foreign demand for preparations of corn is thought to warrant the execution of this project on a large scale. The government commission has agreed to assume charge of such an exhibition, and it is urged that the United States should make a showing comparing favorably with other nations. At the previous Paris exhibitions, it is said, the American exhibits of cereals have been inferior to those of European countries. The execution of the project under consideration will cost about \$30,000, which amount must be raised by subscriptions by commercial bodies, railroad companies and private individuals.

The plan of the exhibit involves the erection of a separate pavilion, graceful and airy in style and unique in purpose. The roof, columns and chimneys will be built of the corn fodder, the interior and exterior will be entirely covered with corn stalk and ear. The red, white and deep yellow of the corn, the brown of the sorghum and the dead green of the corn blades will relieve the interior and combine to produce an admirable architectural effect, and under the



IMPROVED CORN SHELLER AND CLEANER.

bright glare of electric lights it will certainly be very beautiful. The columns, balustrades and lattice-work are all to be formed of the ears of corn and leaves. The frieze over the columns and the two panels next to the towers are to be formed of mosaics, producing the same effect as the antique Pompeian marble mosaics, and instead of the small pieces of marble the grains of vari-colored corn will be used. There will be emblems of husbandry and mottoes significant of the fertility of the soil, all in corn, and they will show one of our great sources of wealth from the boundless and exhaustless prairies of our vast country; and this exhibit will unquestionably be one of the most beautiful and novel, as well as the most appropriate, of the Paris exposition.

The national flags of the United States and France

will be displayed from each of the main towers, and streamers will fly from the roof containing conspicuously the names of each of our great corn producing states, namely: Illinois, Iowa, Indiana, Ohio, Missouri, Kansas, and Nebraska. The shields with the coat-of-arms of each of the above named states, all worked in corn, will be hung on the walls of the pavilion. An American kitchen will be established, under the auspices of the exchanges, in which shall be prepared, in American ovens and ranges, all the known preparations from corn, cerealean, cerealean flakes and maizena, including corn-bread, corn-cakes of various kinds, hominy, samp, corn-starch puddings and other forms, to the number of over one hundred. It is also proposed to give a ten-minute lecture by a competent man at the end of each hour, every day during the exhibition, on the known merits of Indian corn, the mode of preparing the same, cooking and general healthfulness of the article, and also to distribute a profusion of pamphlets in the English, French and German languages, fully describing and telling how to cook the staple. The use of ground corn-meal in the brewing of ale, lager beer and porter, as a substitute for the more expensive article of malt, will be a feature of the corn exhibit and will be fully explained to those interested by a practical brewer.

MINNEAPOLIS GREATNESS.

When the far northwestern skies are grimly scowling,
When the Minnesota cyclone fierce is howling,
When the gruesome, chillsome, windsome, snowsome blizzard
Pelts the ozone thro' the Minnesota gizzard,
When the ripping, roaring, twisting, tough tornado
Sweeps a swath throughout the hard-wheat El Dorado,—
It is simply nature's only way of showing
Minneapolis milling editorial egotism, under bursting
pressure, and with wide-split safety-valve the unwholesome pent-up
nauseous gases safely out into the atmosphere off-blowing!

When the kindly sun and moon and stars cease shining,
Giving up to gloom a universe repining,
When with sickening thud there comes a quick cessation
Of the universal motor, gravitation,
When Niagara and St. Anthony stop falling
For a space to list to more uproarious bawling,
Let not terror freeze the marrow too compactly—
It is merely a Minneapolis milling editor, rising
in his hot, consuming, oxy-hydrogen love of self to declare in god-like
style unto a trembling race: "Ah there! That's my personal, mental,
moral and professional magnitude exactly!"

When the starry dome of heaven cracks asunder
To a magnitudinous obligato thunder,
When a vigintillion flaming calcium torches
Come with demons marching from Plutonian porches,
When the earthquake wild the solid earth is shocking,
When from polar seas the icebergs great sail rocking,
Do not think these signs tell nearing desolation,—
It is merely all the powers of nature, listening
to the Minneapolis milling editor's parlor elocutionary Booth-and-
Barrett-Potter-Langtry recitation of his own idea of his own supreme
importance as the only original instigator, creator, perpetuator and
Keely-motor power of all that mortal men have classified as "all crea-
tion," and that's the only way a comparatively insignificant thing like
nature can have to show its approbation, its complete appreciation, of a
thing so vigintessentially big as the Minneapolis milling editorial article
of silly, senseless, sickening self-inflation!

BANG.

*Duluth, Minnesota, January, 1887.***A REAL OLD MILLER.**

I want a gol-derned poet to kill,
A feller with long lank hair,
What's alluz a scribblin' about a mill
An' the things he sees in there.
I'd like to see him liftin' this sack
An' carryin' it up the stair,
Till he got a crick in the small o' his back
An' lost his romantick air.
Them fellers is alluz a seein' ghosts
In "the old mill under the hill"—
Ijits! a mixin' spook with upright posts!
It's them that I'd like to kill!
They jabber about the tolls an' grists,
An' the dust on the miller's hat,
Till I feel like doublin' up my fists
An' a squashin' 'em slapjack flat.
The nex' dern poet 't comes this way,
A writin' rotten all-fool rhymes
On the mill, will lose his breath that day,
Or my name is not Bill Grimes!

I. DIOT.

*January, 1889.***THE SOUTHERN MILLERS' ASSOCIATION.**

Among the associations of millers recently formed in the United States, one of the most important is that organized at Nashville, Tennessee, on Wednesday, January 24. There was an attendance of millers representing an aggregate production of 13,000 barrels a day. Dr. E. T. Noel, of Nashville, acted as temporary chairman. He welcomed the visitors and made a humorous speech setting forth the object of the gathering, and after his speech the election of permanent officers took place, resulting as follows: Charles Ballard, Louisville, president; John J. McCann, of Nashville, vice-president; L. H. Lanier, of Nashville, secretary and treasurer. The following board of directors were chosen: T. H. Cheek, Marietta, Ga.; L. H. Lanier, Nashville; Chas. Ballard, Louisville; J. B. Lilly, Franklin, Tenn.; S. R. Williams, Nashville; R. L. Gaut, Morristown, Tenn.; J. J. McCann, Nashville; T. J. Brownell, Hopkinsville, Ky.; E. B. Whitfield, Clarksville, Tenn.; I. N. Miles, Frankfort, Ky.,

and Jos. Le Compte, Lexington, Ky. The organization will be known as the "Southern Millers' Association." The principal object of the association is to adopt a uniform method for the sale, manner of payments and length of time upon which flour is to be sold and to rectify the abuses to which the Southern mills have long been subjected.

Among the millers and mills represented were the following: T. H. Cheek, Marietta, Ga.; American Mill Company, Nashville Mill Company and Lanier Mill Company, of Nashville; George V. Lewis, Franklin, Ky.; Melford Mill Company, Oakland, Ky.; White and Street, Cadiz, Ky.; Crescent Mill Company, Hopkinsville, Ky.; J. M. Ramsey, Trenton, Tenn.; Victor Mills, Shelbyville, Tenn.; J. B. Lilly, Franklin, Tenn.; Milford, Bros., Bowling Green, Ky.; Morristown Mills, Merritt Mill Company, Morristown, Tenn.; R. O. Gathright, Louisville, Ky.; Ajax Mills, Gallatin, Tenn.; J. M. Veach, Adairville, Ga.; Miles and Son, Franklin, Ky.; Stanford Roller Mills, Stanford, Ky.; Ballard Mills, Louisville, Ky.; Davenport and Bransford, Owensboro, Ky.; Belmont Mills, Murfreesboro, Tenn.; Volunteer Mills, Tullahoma, Tenn.; Kendrick, Petus and Co., Clarksville, Tenn.; Alex. H. Smith, St. Louis; Geo. Brose, Evansville, Ind.; Memphis Mill Company, Memphis, Tenn.; Iglehart Bros., Evansville, Ind.; Lea and Neeley, Franklin, Ky.; Damond Mills, Glasgow, Ky.; Bellbuckle Mills, Bellbuckle, Tenn.; W. C. Fuhrer, Mt. Vernon, Ind.; Model Roller Mills, Trenton, Ky.; Melrose Mill Company, Evansville, Ind.; Henry Roller Mills, Henry, Tenn.; Crown Roller Mills, Newton, Tenn.; Gallatin Mills, Gallatin, Tenn.; Lexington Roller Mills, Lexington, Ky.; O. S. Bryant, Scottsville, Ky.; E. Gripp and Son, Louisville, Ky.; E. M. Smith and Co., Chattanooga; Geo. V. Lewis, Franklin, Ky.; Clark, Warder and Co., Glasgow, Ky., and the Home Mill Company, Easton, Tenn. The meeting adjourned to reconvene at Indianapolis, Ind., on the first Tuesday in June.

AMERICAN FLOUR IN GREAT BRITAIN.

Notwithstanding the oft-heard statement that "American flour is losing its hold on the British market," that flour still displays a very strong hold on that market. During the year 1888 strenuous efforts were made by the British millers and flour and grain dealers to take advantage of the shortage in the American wheat crop. They bent all their energies and applied all their resources to the importation of Russian and other wheats in order to set British mills going to make up the deficiency in the American supply. The result of all their endeavors, combined with the American shortage, may be seen in the following official table showing fully the importations of foreign flour into Great Britain for the past three years, together with the sources of supply drawn upon:

	1888. cwt.	1887. cwt.	1886. cwt.
U. S.—Atlantic	11,488,790	13,716,830	10,057,524
U. S.—Pacific	1,068,306	1,156,613	1,415,668
Austria-Hungary	1,946,038	1,390,605	1,362,285
Germany	1,109,179	588,876	816,737
Russia	232,544	42,985	22,610
France	101,864	98,620	114,594
Denmark	83,995	54,932	66,587
Australia	52,013	7,023	72,692
Canada	784,358	954,771	770,530
Sundries	44,646	46,290	40,005
Total	16,912,773	18,056,545	14,739,232
Total sacks of 280 lb.	6,764,800	7,222,400	5,896,000

These figures should go far towards reassuring timorous persons. The United States, in a year of decidedly short crops, with Great Britain making every effort to import more wheat grain and less wheat flour, has been able to withstand the competition of the whole wheat-growing and flour-making world and to send Great Britain 75 per cent. of the flour she imported in 1888. The significance of that fact may be best appreciated by comparing the percentage of 1888 with those of past years. The last number of THE MILLING WORLD gave a table, compiled from official sources, showing that the American percentage in British flour importations had ranged as follows: In 1874 it was 53 per cent.;

1875, 37 per cent.; 1876, 39 per cent.; 1877, 24 per cent.; 1878, 46 per cent.; 1879, 64 per cent.; 1880, 65 per cent.; 1881, 67 per cent.; 1882, 60 per cent.; 1883, 70 per cent.; 1884, 68 per cent.; 1885, 74 per cent.; 1886, 77 per cent.; 1887, 82 per cent.; in 1888, 75 per cent. With an average crop of wheat in 1889 the percentage will probably go above the high notch of 1887, as the Britons, who have grown fastidious through long use of the fine American flour, will be eager to return to its use in still greater degree, and they will buy the good, strong, homogeneous, reliable American flour, prices being anywhere nearly equal, every time in preference to the doubtful, weak, unreliable, heterogeneous mixtures made of mixed grains and cooked and steamed and whizzed and washed and dried in British mills. If any thing were needed to demonstrate the invincible strength of the American flour in the British market, the situation in 1888 certainly furnished all that was needed.

Speculation has aided in decreasing the flour and grain trade with foreign countries on the crop of 1888. There was a shortage of considerable magnitude, a shortage whose amount far exceeded the total average crops of several of the "great" wheat-growing competitors of the United States, and the speculators magnified it and increased prices above the export notch. In spite of all this, in spite of a loss of wheat equal to the total crops of some of the vaunted "great" wheat countries, in spite of speculation that has left on hand a surplus still much larger than the total crops of those "great" countries, the United States has done well, sending to Great Britain 22,503,200 hundredweights, or 35 per cent. of her total importation of grain, and 12,557,096 hundredweights, or 75 per cent. of her total importation of wheat flour. In viewing these figures it must be remembered that it is principally the admirable, the superior quality of the American grain and flour that has kept up the American percentage of supplies to foreign countries in face of the world's competition and of the very unfavorable condition of affairs connected with the crop of 1888. Many Europeans deny that the American wheat is superior to others, yet those same Europeans boast in one breath that "Russian and other wheats are really preferable to American wheats," and in the next breath complain that "supplies of wheat on hand, mostly Russian and Indian, are abundant, but inferior, and not enough good wheat can be had for milling." American wheat is needed by most of the European flour-makers to grind with the other vaunted wheats, that are not able to stand alone and that can go into consumption only when aided by a liberal admixture of the strong American grain.

DRIVING FLOUR-MILL MACHINERY.

It is not necessary that a flour-mill of not over 100-barrel capacity should have more than three lines of power-transmitting shafting in it, one line in the basement, one in the second story and one at the highest point in the top of the building. If steam be the motive power and the plant small with a quick motion, the crank-shaft of the engine may be coupled directly to the main line of shafting in the basement. If it be a large plant with a slow motion of less than 100 revolutions per minute, it must be connected with the main line of shafting by belt. That is made necessary on account of getting speed on the main shaft, which should not be less than 125 per minute and ought not to be more than 140 where nine-inch rolls are used, but may run up to 160 for six-inch rolls. Where water is used as a motor it will be found far more convenient and less troublesome to use water-wheels running on horizontal shafts. The main line of shafting in the basement of the mill can then be continued through into the water-wheel house and driven by belt direct from the water-wheel shaft. It might occasionally be found impractical to do that on account of low heads and slow motion of wheel. In such cases a counter-shaft will have to be introduced for the purpose of getting up speed.

The line of shafting in the second story of the mill should have a speed of anywhere from 125 to 150 revolutions, it not being material within that range. The upper shaft which carries the elevators should be speeded at about 45 revolu-

tions per minute. The upper shaft should be driven by friction in much the same manner as are all the stands of elevators in large grain warehouses or elevators, the difference being that in the mill the entire line of elevators are driven at the same time, while in the grain-houses each stand of elevators is driven independent of the others, and any one or more stands can be stopped and started again without interfering with the others. That scheme is neither practical nor desirable in a flour-mill. The method of gearing is to procure a pair of friction-wheels or pulleys, with the driver made of paper and the driven of iron, with a difference of about three to one in diameter, the driver being the smallest. The driven pulley should be made much heavier than the usual belt pulley is. The faces of both must be straight. The iron wheel goes on the end of the elevator shaft and the small one on a short heavy shaft immediately below it, in such a manner that the iron pulley will rest squarely on the top center of the paper friction-wheel. The short or friction shaft should never be less than three inches in diameter, and in large mills it must be at least four inches. The length of the friction-shaft will be determined somewhat by the size of the mill. There will be a main pulley on it in addition to the friction-wheel, which gives motion to it by a belt coming up from below.

The capacity of the mill determines the width of the pulley and friction-wheel, and that in turn will determine the length of the shaft. For supporting the friction-shaft and the end of the elevator-shaft a gallows-frame running from floor to roof must be constructed, with three posts on each side into which bridge-trees must be framed for holding the journal-boxes. There will have to be three journal-boxes for the friction-shaft, one on the end outside of the main driving-pulley, and one on each side of the friction-wheel and very close to it. There should also be a journal-box on each side of the iron friction-pulley. The three bridge-trees supporting the friction-shaft can be firmly and immovably framed into the posts, but the two supporting the end of the elevator-shaft must be made movable, up and down, at one end and hung on a pivot pin at the other. The front tenons of the two upper bridge-trees must project through the mortise far enough, say six inches, to permit of lever attachments being fastened to them with which to weight the pulley down when at work and to throw it off the friction-wheel when at rest. It is not advisable to make the upper pulley heavy enough to guarantee against slippage, in mills of considerable size, hence preparation must be made to increase or diminish weight by using levers and weights on the same principle that safety-valves are weighted. As mills are now built, the upper shaft will have considerable work to do. In addition to the various stands of elevators that have to be driven, the slow-running scalp-ers, as a rule, are also driven from it. It is not advisable to over-weight the pulley, because it will be convenient to do so; it increases the load and wastes power to drive it. Add only sufficient weight to insure against slips.

Now, going back to the basement, we will put a pulley on the line-shaft there close to the power end of the building, which may vary from four to six feet in diameter according to the capacity of the mill; put a similar pulley on the end of the line-shaft in the second story, and also one on our friction-shaft referred to. On the top floor place an idler pulley, say two feet in diameter, which must also be used as a tightener, by raising and lowering on a perpendicular line. Beginning on the running-up side of the driving-pulley in the basement, run the belting up through the mill and over the tightener on the top floor, then down through the floor and under the pulley on that line of shafting, then up through the floor again and over the pulley on the friction-shaft and back down through the mill until the other end of the belt is met; fasten them together, and the mill is belted so far as main lines of shafting are concerned. One belt does the whole business and does away with all gear-wheels, which is the grand object sought after. A mill so driven will run smoothly and noiselessly and will be much less troublesome to take care of. All fast-running machines, such as purifiers, centrifugal reels, bran-dusters and cleaning

machinery, are to be driven from the line in the second story of the mill. Some of each class of mills will probably be set on the upper floor to be belted up to, and some on the floor beneath.

In arranging machines care should be taken so to do it that returns will run from one to the other without re-elevating, as much as it is possible to do so. By doing that, much outlay will be saved, both in material and work. It will not take so many stands of elevators, and each stand saved amounts to quite a sum; besides it greatly simplifies the whole arrangement and leaves more room on the floors of the mill. The main line in the basement drives the rolls and flour-packers, and sometimes one of the cleaning-machines that may be located in the basement. If it be the desire to set the packers against the wall, it may in that case be as well to run a counter-line close to the wall in the basement to drive them with. The belt can then run straight up and be out of the way. The counter-line can be driven by belt from the main line. It will be found a good plan to set each set of rolls a few feet apart, so as to give a better opportunity to distribute the product among the machines on the upper floors of the building. When the rolls are set too close together, it obliges the machinery above to be huddled together in the same way, which makes it both awkward and inconvenient. For all mills up to 100-barrel capacity three double sets of rolls are all that will be used, and there will be plenty of room to spread them apart.—*R. James Abernathy in Mechanical News.*

POINTS IN MILLING.

ALMOST every mill-owner is at the mercy of his employees to a very important degree. The only mill-owner who is not at the mercy of employees is the one who has no employees, that is to say, one whose mill requires only one man and who is himself that man. The owner who is a practical miller is situated badly enough, while the owner who knows nothing or next to nothing about flour-making is infinitely worse off so far as his assistants are concerned. Where the owner understands the machinery in his mill, his employee can shirk, or abuse, or neglect only to a certain extent. When he understands it not at all, the average loafing employee is in clover so long as his negligence does not cause the mill to burn nor bankrupt the owner.

THE negligent miller is no myth. He is a tangible, visible, constant, expensive reality. He is omnipresent, omnipotent and ruinous. I see him everywhere. The other day I ran across an edition of him, in six parts, in a certain mill. There were six of him in one mill, and he was getting in his work from top to bottom of that mill. To tell what he was accomplishing in that place would require an inventory, in which each part and parcel would need separate mention with all the ruin wrought upon each by the six wreckers who were paid millers' wages and who were spoiling grain, spoiling flour, spoiling machinery and spoiling the owner's reputation.

I AM convinced that many mills do not pay simply because of bad management in the mills themselves. The failure is as often due to reckless wreckage and wastage in the mill as to unwise management in the office. No office can carry to success a mill in which every minute of the day sees some important item of waste. The contest is unequal. The office will not win the fight. The shrewdest buying of the best grain, the keenest looking for good customers, the safest methods of conducting the financial part of a milling business, all fail so long as the mill itself is carelessly operated. I have seen two men fail in the milling business, within the past year, with whose business I was familiar, and it is beyond doubt that their failure was due to two causes: 1. They were not practical millers. 2. Their employees ran their plants to ruin. Their failure was inevitable from the second cause, but not necessarily from the first cause. I know some successful mill-owners who are not practical millers. They are men who know enough to employ good and reliable men of skill and experience to run

their mills and take care of their machinery, and in that way they avoid the ruin that comes from engaging pirates and slouches, whose only idea of work is to do as little of it as possible.

Nearly every set of specifications contains, at least once, the statement that certain details are to be executed in a "workmanlike manner." The prolific cause of discord between contractor and owner lies in the "workmanlike manner" business.—*Manufacturers' Gazette.*

COMMENDATORY LETTERS. LETTERS THAT EXPLAIN THEMSELVES.

CURTIS REGULATOR CO.

I take pleasure in saying that the regulator valves put on by me in this State last year have proved perfectly satisfactory in every respect. In the coming season I anticipate no trouble in placing your valves, not only in places where they are not now used, but also in those places where the others makers have attempted to do what I did last year.

Yours respectfully, C. H. W. COPELAND, New Orleans, La.

CURTIS REGULATOR CO.

OFFICE OF THE BAGLEY & SEWALL CO.,
WATERTOWN, N. Y., JAN. 19, 1889.

GENTLEMEN: In reply to your inquiry of the 17th inst., I would say that we are perfectly satisfied with the water pressure reducing valves furnished by you and intend to continue their use. We tried a number of others and are satisfied that yours are the best for our purpose. We send an order for two more to-day, making nineteen in use.

Yours very truly, C. H. CAMPBELL, M. E.,
The Bagley & Sewall Co., Engineering Dept.

PERSONAL MENTION.

It is announced that Mr. G. B. Douglas, formerly connected with this journal, has settled permanently at Silver Creek, N. Y., where he has become part proprietor of the *Silver Creek Local*, a weekly newspaper.

Announcement is made by the well-known Case Mfg. Co., of Columbus, O., that Mr. J. Murray Case has sold his stock in that company and that his interest in the actual management of the house ceased on January 1, 1889. We understand that the purchaser of Mr. Case's stock is Mr. J. L. Greene, who has for a long time been connected with the house in a clerical capacity, and who comes into the management with large capital and a full and accurate knowledge of all the affairs and business of the great company. Mr. Case goes to Europe in March next, and, although the statement is not directly authorized, we understand that he will go into mill-building on an extensive scale, principally in France at first, where he is already well and widely known. The Case Mfg. Co. is a joint stock concern, and not a "firm" or "partnership," as has been erroneously announced in several exchanges. Its great and steadily growing business will go on uninterruptedly under the new management. Mr. Greene, who succeeds Mr. Case, is a man of brains and great business capacity, and he and his enterprising associates will keep the Case Mfg. Co. right in the front rank, where it belongs by reason of its excellent machines and its uniformly successful mills.

SPECIAL NOTICES.

LIBERAL OFFER.

With a view of increasing our subscription list, we will send a copy of R. J. Abernathy's new book, "The True Short System" (Price \$2.00) and "The Milling World" for one year at the very low price of Two Dollars. Renewal will be treated same way. This offer will only continue for a limited time. Now is your chance. Send in your subscriptions at once.

Address,

THE MILLING WORLD, BUFFALO, N. Y.

BOLTING CLOTH.

Do not order your cloth until you have conferred with us. It will pay you, both in point of quality and price. We are prepared with special facilities for this work. Write us before you order.

CASE MANUFACTURING CO.,

Columbus, Ohio.

Office and Factory, 5th Street, north of Naughten.

TOLEDO MILL PICKS AND STONE TOOL MFG. CO.

Manufacturer

and Dresser of

MILL PICKS.

Made of the best double-refined English cast steel. All work guaranteed. For terms and warranty, address, GEO. W. HEARTLEY, No. 297 St. Clair Street, Toledo, Ohio. Send for Circular.

N. B.—All Mill Picks ground and ready for use (both old and new) before leaving the shop. No time and money lost grinding rough and newly dressed Picks. All come to hand ready for use.

ALSO MANUFACTURERS OF

Shafting, Pulleys, Hangers, Coupling, Machine and Jobbing, Etc., Etc.

PRACTICAL NOTES

A VALUABLE EXPLOSIVE.—The new German explosive prepared by Schoeneweg, in its property of flamelessness when exploded, is claimed to be of especial value as a substitute for ordinary blasting powder and other explosives in fiery coal mines. It consists of nitrated hydrocarbons mixed with an oxidizing agent, such as chlorate of potash, and some organic salt, which renders the mixture flameless. The substance is not hygroscopic, is of a bright yellow color and can be kept for any length of time without undergoing any change, nor can it be exploded by a flame or a hot substance, but only by a detonating cap. Various experiments made with this compound appear to prove that it possesses the valuable advantages claimed for it by the inventor, and that it is a great acquisition in those mines where an explosive of this nature will insure safety. Its power is found to be equal to that of No. 1 dynamite, while the cost of manufacturing the new substance is less than the latter.

GENERAL NOTES.

THE Queen of Great Britain is now sovereign over a continent, 100 peninsulas, 500 promontories, 1,000 lakes, 2,000 rivers and 10,000 islands. She waves her hand and 900,000 warriors march to battle to conquer or die. She bends her head and at the signal 1,000 ships of war and 100,000 sailors perform her bidding on the ocean. She walks upon the earth and 300,000,000 human beings feel the least pressure of

her foot. The Assyrian Empire was not so populous. The Persian Empire was not so powerful. The Carthaginian Empire was not so much dreaded. The Spanish Empire was not so widely diffused. The Roman power was weak in comparison, and Greece was but as a small village.

MILLING PATENTS.

Among the patents granted January 22, 1889, are the following:

James F. Winchell, Springfield, O., No. 396,448, a crushing and grinding mill, assigned to the Foos Mfg. Co., same place.

Percy H. Baily, London, England, No. 396,456, a biscuit, one-half assigned to B. F. Smith, Chicago, Ill. This is described in the claims of the patent as a food or health biscuit composed of a flour, butter, sugar and milk combined with an artificial powder consisting of tri-basic phosphate of calcium, carbonate of calcium, fluoride of calcium, phosphate of magnesium, phosphate of soda and chloride of sodium.

Frank C. Hall, Philadelphia, Pa., No. 396,559, a grinding-mill.

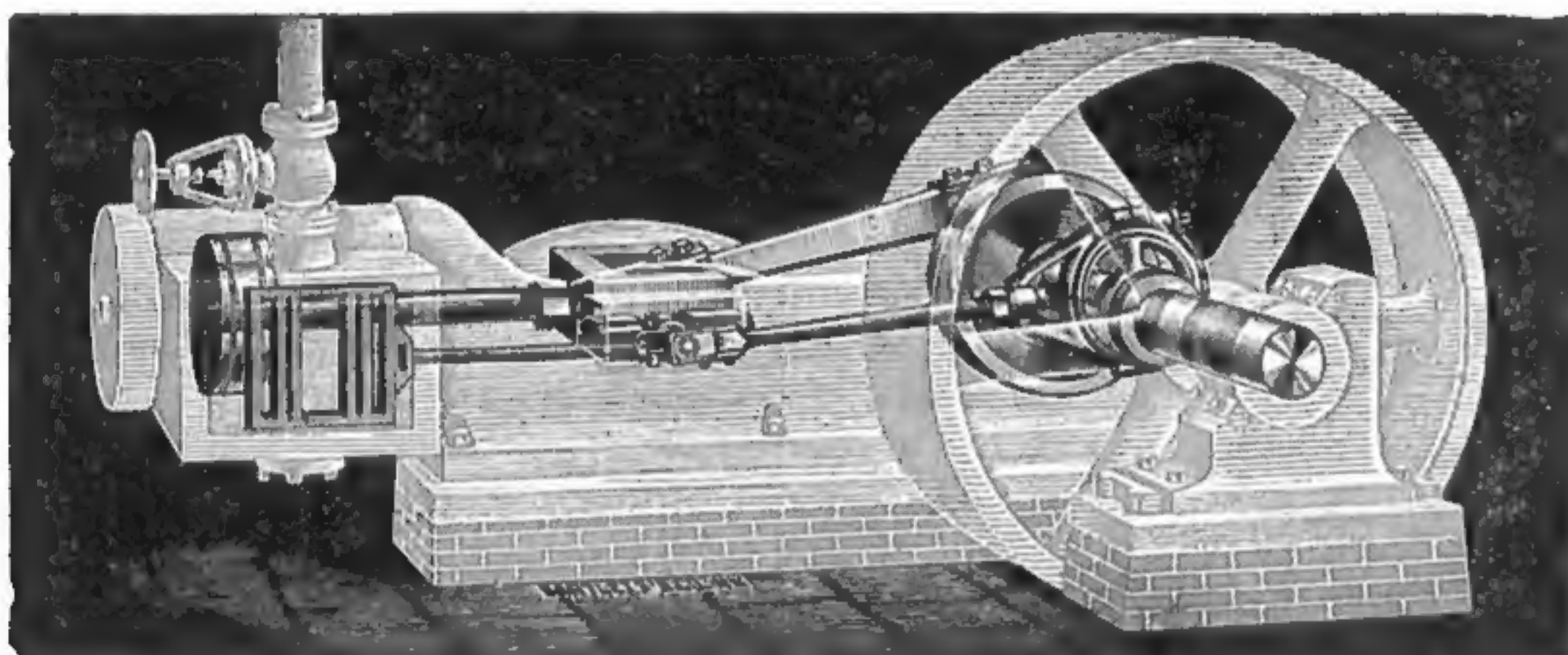
Thos. W. Harrison, Emmetsburg, Ia., No. 396,561, a bag-holder.

Christian Held, Indianapolis, Ind., No. 396,567, a machine for making macaroni and noodles.

Richard Smith, Stoke-on-Trent, England, No. 396,621, preparing wheat for food, described as a process which consists in subjecting wheat-germs to the action of superheated steam until the flavor of the germs is imparted to the steam, and then subjecting the broken wheat to the action of the same steam.

Wm. C. Ayres, Plymouth, N. C., No. 396,678, a garlic-separator.

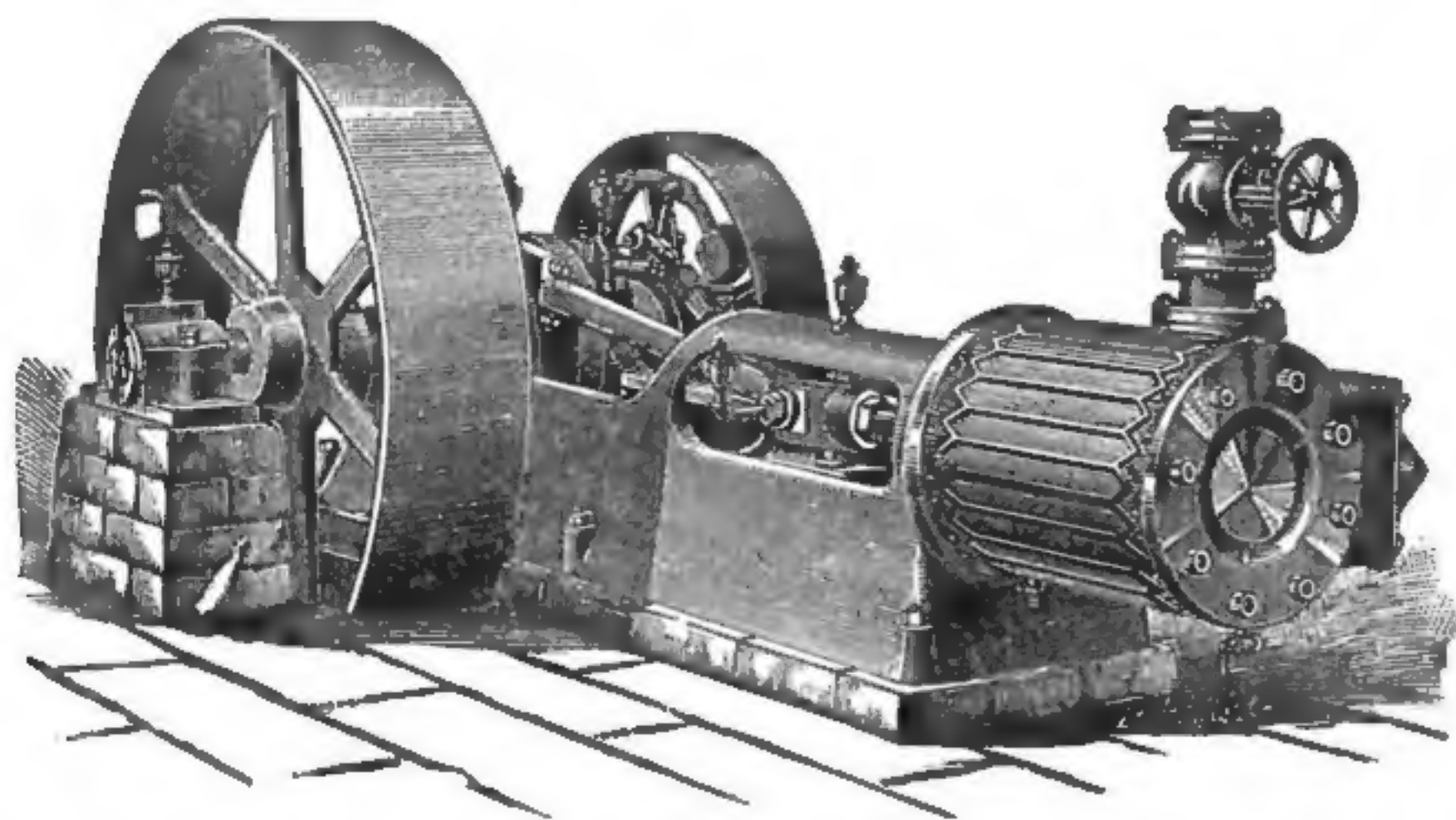
THE NEW PORTER HEAVY-DUTY ENGINE.



The Most Power for the Money, and All Things Considered the Most Economical.
For Illustrated Circular Address,

PORTER MANUFG. CO., LIMITED, SYRACUSE, N. Y.

Economic Power Plants

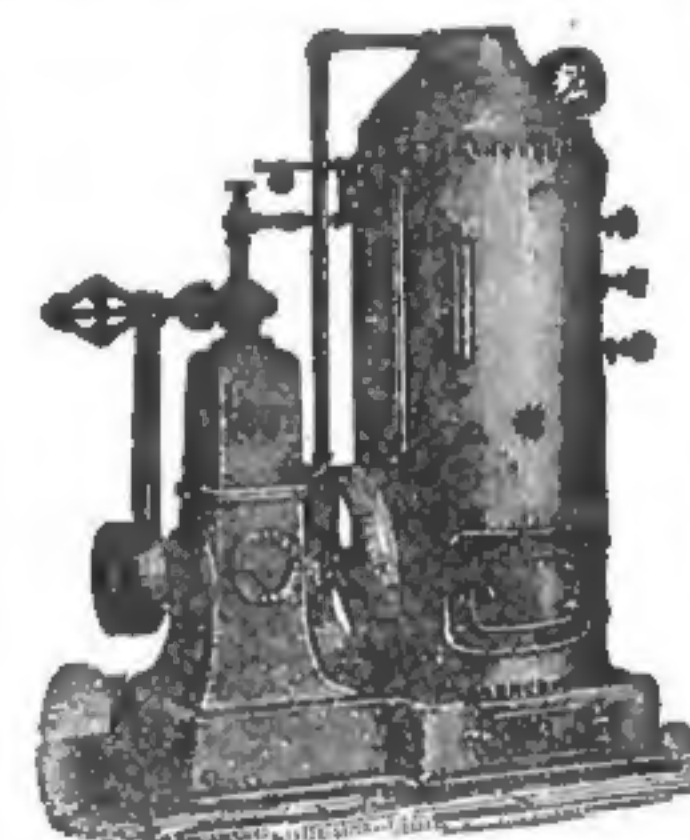


Especially Adapted to Electric Lighting and

WOOD-WORKING ESTABLISHMENTS

MANUFACTURED BY

VALLEY IRON WORKS, WILLIAMSPORT, PENN.



**DURABLE,
ECONOMICAL,
NOISELESS,
SELF-LUBRI-
CATING,
LOW-PRICED.**

One and two Cylinder Engines, with vertical or horizontal boilers, are running 2 years without using a wrench on them.

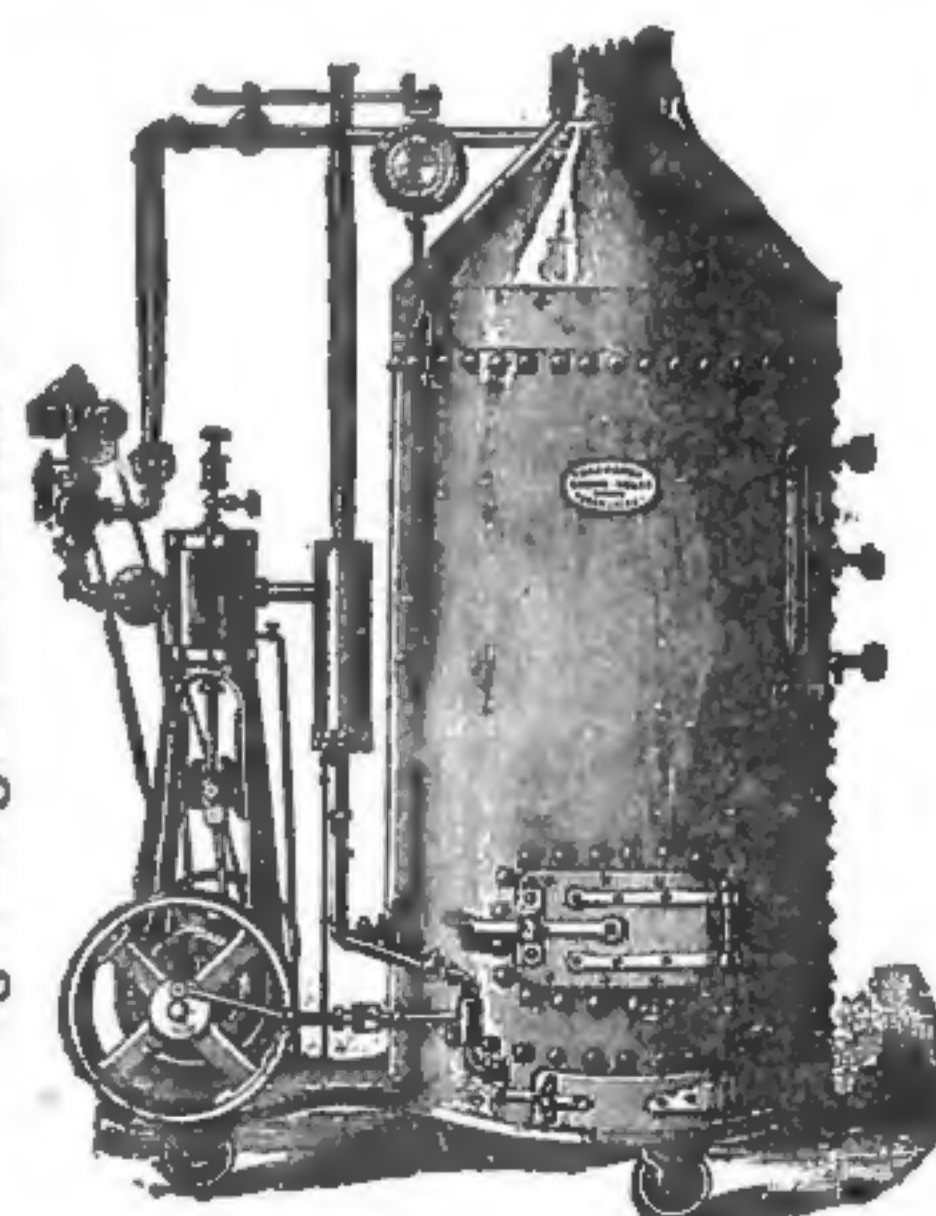
1 to 15 H. P.

SEND FOR CIRCULAR
TO

CASTLE ENGINE WORKS
INDIANAPOLIS, IND.

TONAWANDA ENGINE AND BOILER WORKS

A Large Assortment of Machinery.



The Best 6-Horse Power Semi-Portable Upright Engine and Boiler Made.

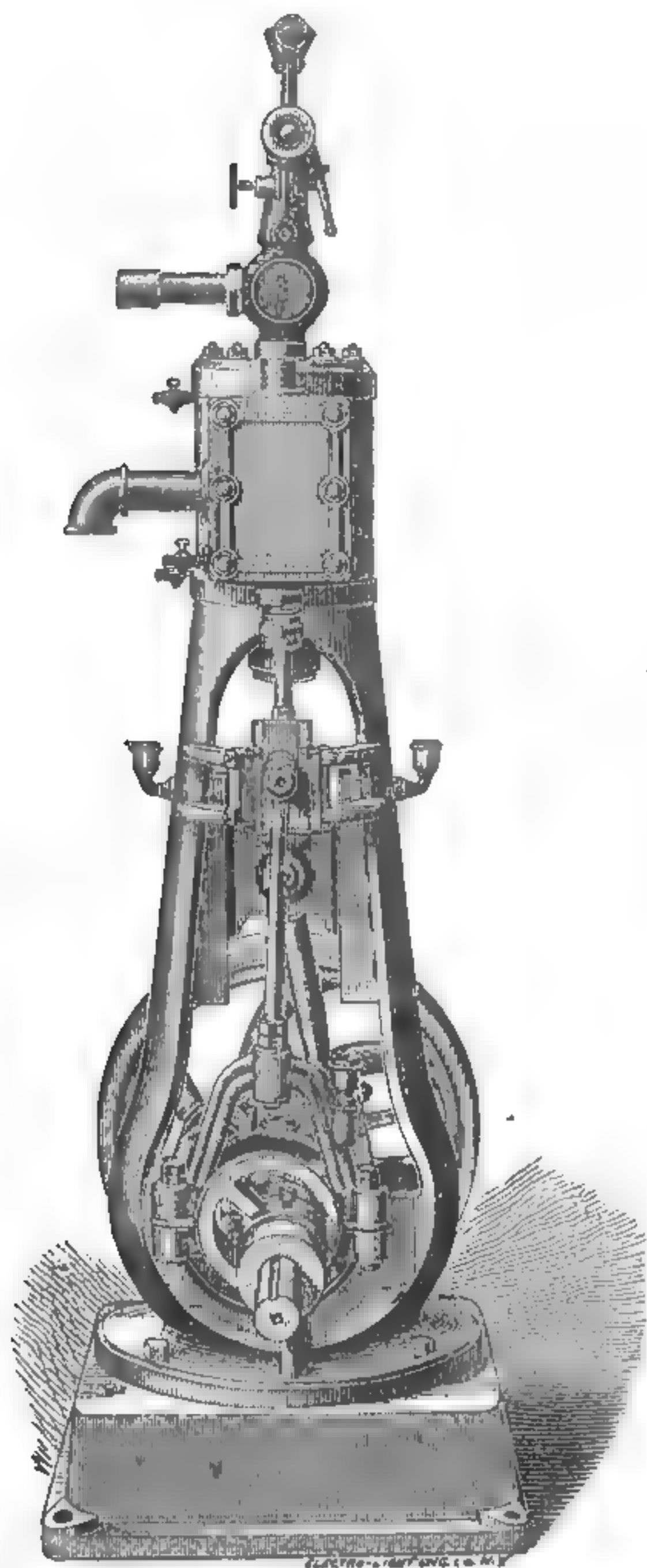
SPECIAL PRICE. GUARANTEED.

SEND FOR CATALOGUE.

ARMITAGE, HERSCHELL & CO.

Tonawanda N. Y.

AUTOMATIC VERTICAL ENGINES



Especially adapted for Small Electric Light Plants. Perfect Regulation. Reversible Link Motion for Marine Use. Five to Fifteen Horse Power. Also manufacturers of

Lathes and Special Tools

Metal Patterns, Models and Machinery Built to Order. Send for Prices and Specifications.

Lloyd & Sterrett

COR. 16TH AND STATE STS.,

ERIE, - - PENN.

PAYNE HIGH SPEED CORLISS ENGINE

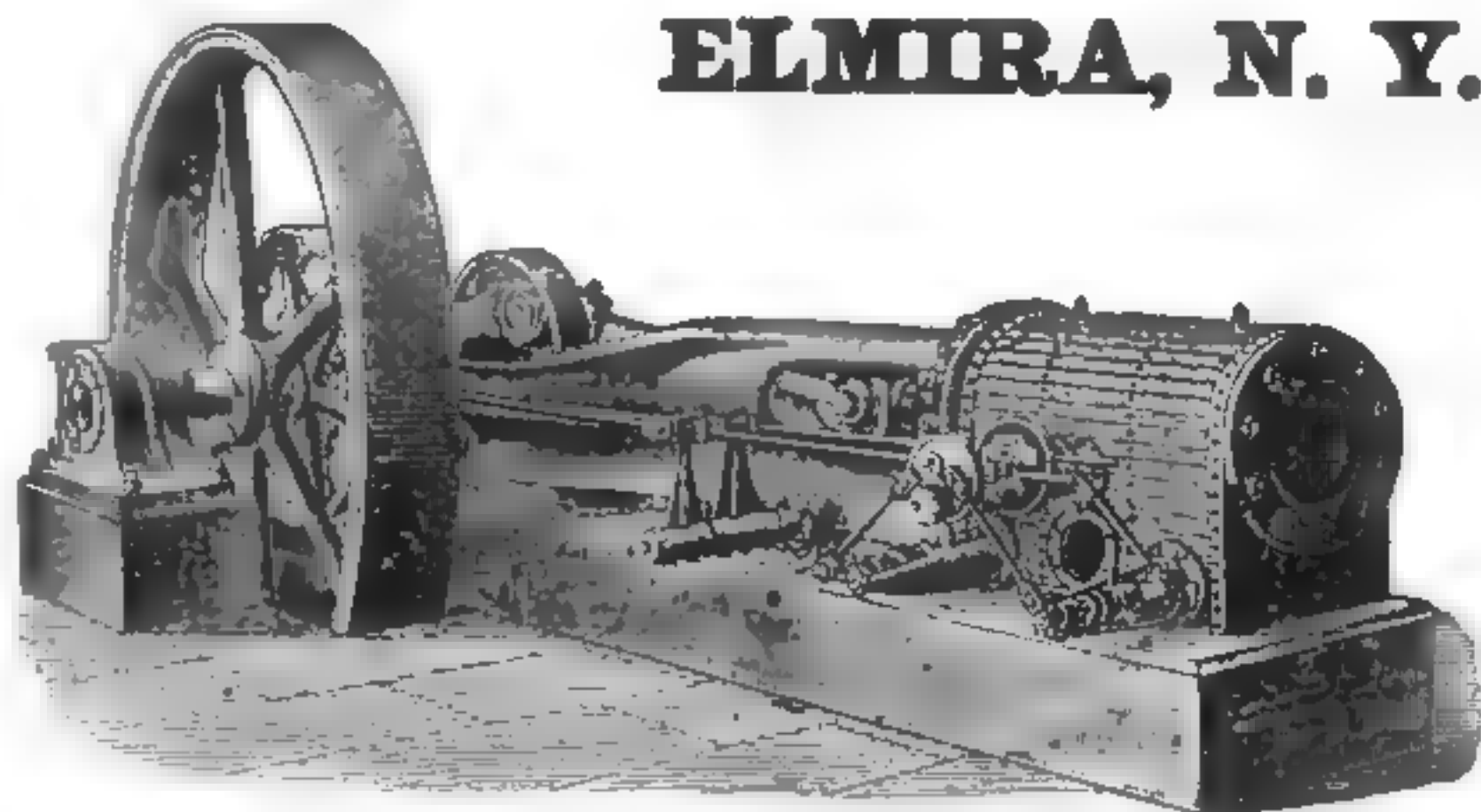
SHAFT GOVERNOR COMBINED WITH CORLISS WRIST-PLATE.

ECONOMY OF FUEL.

REGULATION EQUAL TO ANYTHING IN USE.

B. W. Payne & Sons,

ELMIRA, N. Y.



10 S. Canal Street,
CHICAGO, ILL.

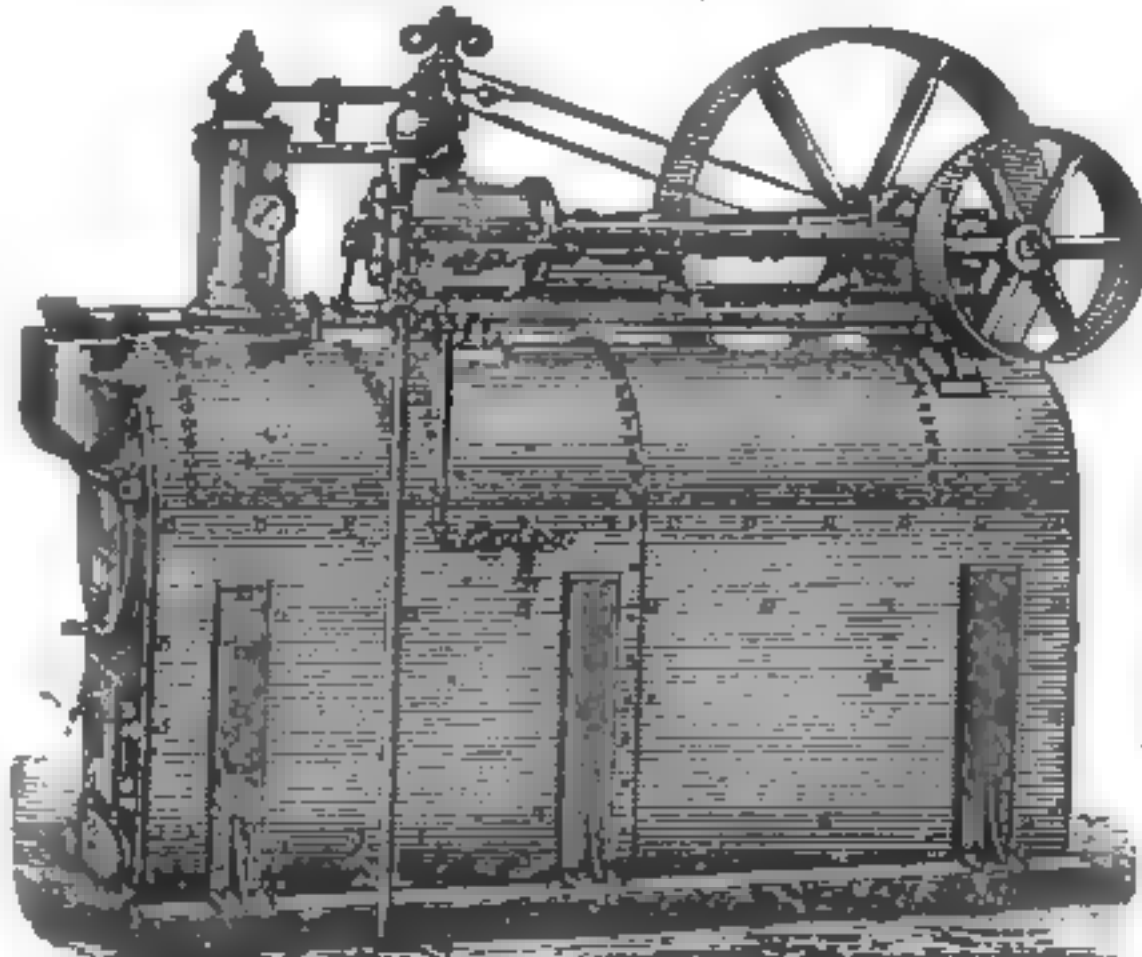
45 Dey Street,
NEW YORK.

Hill, Clark & Co.
BOSTON, MASS.

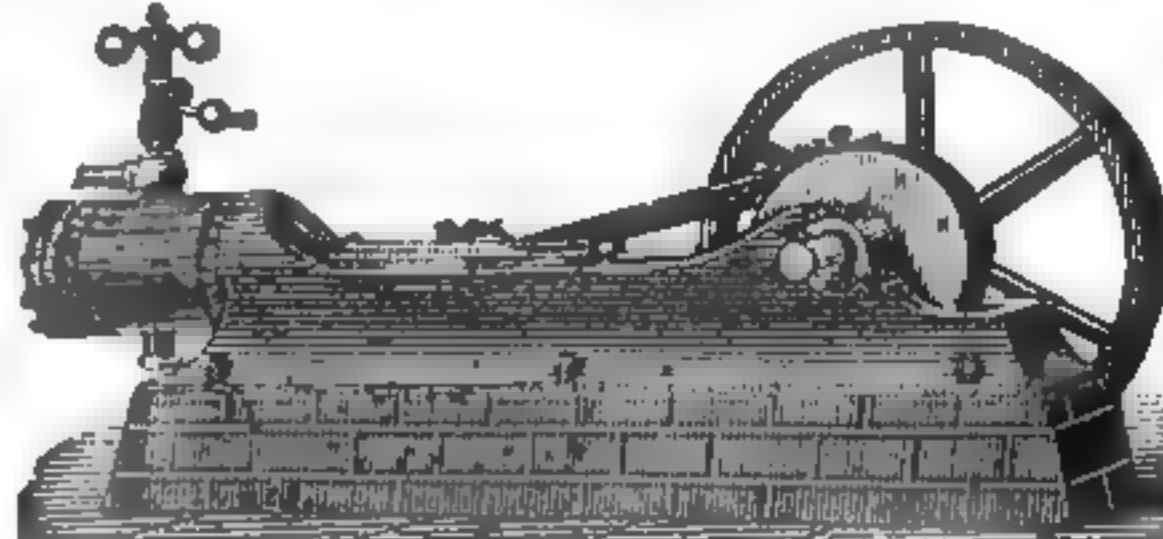
AUTOMATIC ENGINES FROM 2 TO 200 HORSE POWER.

SKINNER ENGINE CO. ERIE, PA.

Awarded **THREE GOLD MEDALS**
by the **WORLD'S INDUSTRIAL and**
COTTON CENTENNIAL EXPOSITION
of ST. LOUIS, MO.



Eastern Office, O. E. Vincent & Co., Room No. 69, 15 Cortlandt St., New York.

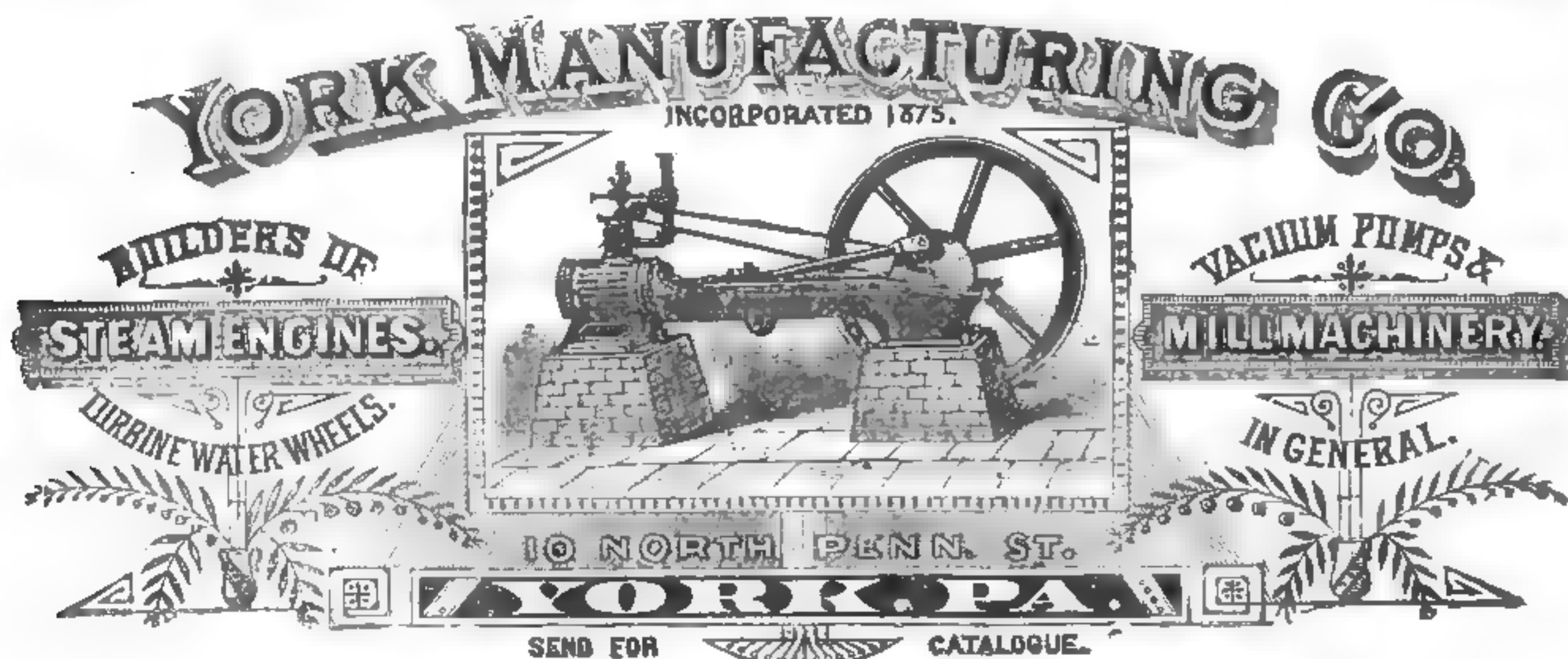


PORTABLE and STATIONARY
ENGINES & BOILERS
MORE THAN 2700 IN USE.

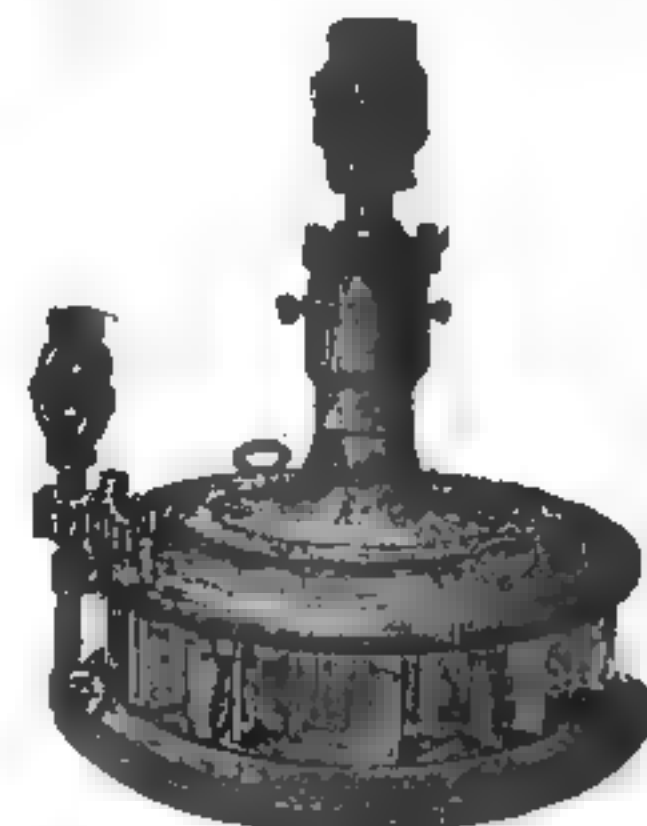
Send for **ILLUSTRATED**
CATALOGUE and PRICES.

We also manufacture the **YORK Ice**
Making and Refrigerating Apparatus.

FLINT MILL MACHINERY A SPECIALTY.



IMPROVED YORK



TURBINE WATER WHEEL.

SEND for ILLUSTRATED CIRCULAR with PRICES.

NOTES & NEWS

The Clinton, Miss., Milling Co., attached.
 J. C. Peak, Sunset, Tex., builds a flour-mill.
 Harmer Bros., Fayetteville, Tenn., add more rolls.
 O. J. Dundas, Kelso, Tenn., puts in 40-barrel rolls.
 Anderson & Corner, Lynwood, Va., remodel to rolls.
 W. A. Fields, Greensboro, N. C., started a roller mill.
 Booth & Harkrider, millers, El Paso, Ark., quit business.
 Chas. E. Manor, of Sands, Va., wants hominy machines.
 W. R. Packard, Mercer, Pa., builds a 50-barrel roller mill.
 Pinney Bros., Manchester, Va., started a grist and feed mill.
 A. J. Leibert, Palm Station, Pa., builds a 30-barrel roller mill.
 D. Weaner, Scalp Level, Pa., is building a 25-barrel roller mill.
 The Yellow Pine Lumber Co., Colmesneil, Tex., build a corn-mill.
 F. H. Hollenbach, Schnecksville, Pa., builds a 30-barrel roller mill.
 E. B. Jones & Co., Smithton, W. Va., build a 40-barrel roller mill.
 Mrs. M. Kiewith, Nokesville, Va., will rebuild her burned grist-mill.
 The Millbourne Mills Co., Philadelphia, Pa., are building a 500-barrel mill.
 J. P. Becker, Meyersdale, Pa., builds a 25-barrel short-system roller mill.
 E. Hemminger, Scottsdale, Pa., builds a 25-barrel short-system roller mill.
 Woodbury Fisk, of Crocker, Fisk & Co., millers, Minneapolis, Minn., is dead.
 Zembower & Carpenter, Buffalo Mills, Pa., build a 25-barrel short-system mill.
 T. Bland, Anson, Tex., wants price-lists and illustrated catalogues of roller-mill machinery.
 The Cornwall Iron Co., Lebanon, Pa., remodel their grist-mill to rolls with 60-barrel capacity.
 C. M. Bivins & Co., Vernon, Tex., have built a flour-mill and will add a 150,000-bushel elevator.
 Vines & Thompson, millers, Esperance, N. Y., have dissolved, Mr. Thompson continuing the business.
 The Bridgewater Flour Mill, Fredericksburg, Va., has been bought for \$15,000 by H. Souther and B. Ficklin.
 J. Engler, Collomsville, Pa., has finished his new mill. It is called the "Collomsville Roller Process Flouring Mill."
 The Jonathan Mills Mfg. Co., Cleveland, O., have furnished machinery to S. Neilson, St. Catharines, Ont., for his mill.
 Page & Highley, Rulland, O., are putting in a lot of machines furnished by the Jonathan Mills Mfg. Co., Cleveland, O.
 The Jonathan Mills Mfg. Co., Cleveland, O., are furnishing the machinery for the mill of Mock & Catron, Abingdon, Va.
 The idle Mokena flouring-mill, Lancaster, O., has been sold to Albert Shupe, of Pittsburgh, Pa., who will refit and operate it on large scale.
 The Farmers' Alliance, Abilene, Tex., want prices of machinery complete for a 50-barrel roller mill to be built there. Address C. J. Munroe.
 J. D. Mickey, Apollo, Pa., puts in a ten-roll system with 80-barrel capacity, together with corn and buckwheat machinery. The Geo. T. Smith Middlings Purifier Co. do the work.
 N. S. McDonnell and others, Des Moines, Ia., incorporated the Des Moines Mfg. Co., capital \$110,000, to manufacture mill supplies, engines, boilers, castings and elevator machinery and build mills.
 According to a report from St. Paul, Minn., there are over 1,000 elevators in the Northwest, representing an aggregate capacity of about 28,000,000 bushels, and of these at least 340, representing about 8,000,900 bushels capacity, are now closed on account of the short crop of wheat.

C. G. Smith and others, St. John, Kans., incorporated the St. John Milling Co., capital \$30,000.

Jas. A. Clark & Co., Cumberland, Md., have ordered from the J. B. Allfree Co., Indianapolis, Ind., one of their short-system corn-meal outfits, including a "Keystone" 4-high corn-mill.

W. F. Cochrane, once a most prominent figure in milling circles because of his connection with the famous purifier patent litigation, was instantly killed on January 19 in a railway collision near Watersmeet, Michigan. Before his death he had become identified with a large milling and mill-furnishing enterprise at Escanaba, Mich. In the same collision Lieutenant-Governor James H. McDonald, of Escanaba, was killed. He was the chief stockholder of the Cochrane establishment.

BOOKS AND PAMPHLETS.

A useful purpose is served by the various sets of anagrams and other enigmatical exercises that are published in *Good Housekeeping*, in combining amusement with instruction and stimulating study along useful lines, historical, scientific and otherwise. In the number for February 2 "A Hidden Menagerie" will set the young folks at work studying up the names of animals, and they will be likely to fix some valuable facts in their minds in so doing. The papers on Home Furnishing and Decoration, begun in No. 98 of *Good Housekeeping*, are prepared from original sources and are of especial value at this time of year when preparations for spring changes are being made.

MID-WINTER (FEBRUARY) CENTURY.—A remarkable feature of the mid-winter *Century* is the opening article on "Gerome," the famous French artist and trainer of artists. Particularly interesting is the frontispiece, which is an engraving of this master's "Napoleon before the Sphinx." Supplementary to this article there are published "Open Letters" on Gerome by the well-known American artists, George de Forest Brush, E. H. Blashfield, Kenyon Cox, Wyatt Eaton, Will H. Low, John H. Niemeyer, S. W. Van Shaick, A. H. Thayer and J. Alden Weir. Other specially artistic features of this number are Mr. Cole's engravings from the originals of Simone Memmi, with accompanying articles by Mr. Stillman and Mr. Cole, in the series of "Old Italian Masters"; also the fourth of Mrs. Mary Hallock Foote's Pictures of the Far West, "The Orchard Wind-Break." Two leading serial features of the number are sustained in a particularly interesting installment of the "Life of Lincoln" and a Siberian chapter by George Kennan entitled "Exiles at Irkutsk." War subjects are continued in "Memoranda of the Civil War," the subjects being "The Battle of Franklin" and the "Canal at Island No. 10." "Slow-Burning Construction," by Mr. Edward Atkinson, of Boston, is an article of practical directions as to the construction of buildings, partly fireproof, on the cheapest plan. Another extremely timely paper is by the Rev. Dr. Washington Gladden on "Safeguards of the Suffrage." "Revival of Hand Spinning and Weaving in Westmorland" is a charmingly written account of a very curious industrial experiment which has recently been successful in England. In an illustrated article on "The Portraits of Mary, Queen of Scots," Mr. Laurence Hutton has told briefly what is now known on this interesting subject. In Charles de Kay's series there is an illustrated article on "The Fairies and Druids of Ireland," with pictures of a descendant of the fairy stock, battle-axes of the heroes, an old harp, bronze swords, the church of Glendalough, a cromlech near Sligo, etc. Mr. Cable concludes the "Strange True Story" of "Francoise in Louisiana," and Mrs. Catherwood concludes her "Romance of Dollard." A Southern story, "Two Negatives," is told by Mary Spear Tiernan; and a pathetic Irish story, "Under the Redwood Tree," is told by George H. Jessop and illustrated by Kemble. The poems are by Kate Putnam Osgood, James Whitcomb Riley and Caroline Hazard, with a prose poem by Langdon Elwyn Mitchell. The "Topics of the Time" are "The Imperfections of American Law of Procedure," "Lynch Law as an Argument for Law Reform," "A Centennial Historical Exhibition," and "French Masters and American Art Students." In the next number of *The Century* will be begun a brief serial story by Mary Hallock Foote, entitled, "The Last Assembly Ball: a Pseudo-Romance of the Far West."

ATTENTION MILLWRIGHTS!

A BOOK YOU ALL WANT.

LEFFEL'S
CONSTRUCTION OF MILL DAMS
 AND
BOOKWALTER'S
MILLWRIGHT & MECHANIC
 A STANDARD WORK.

This practical work of 288 pages gives with full illustrations and complete detail how to build or repair all kinds of mill dams.

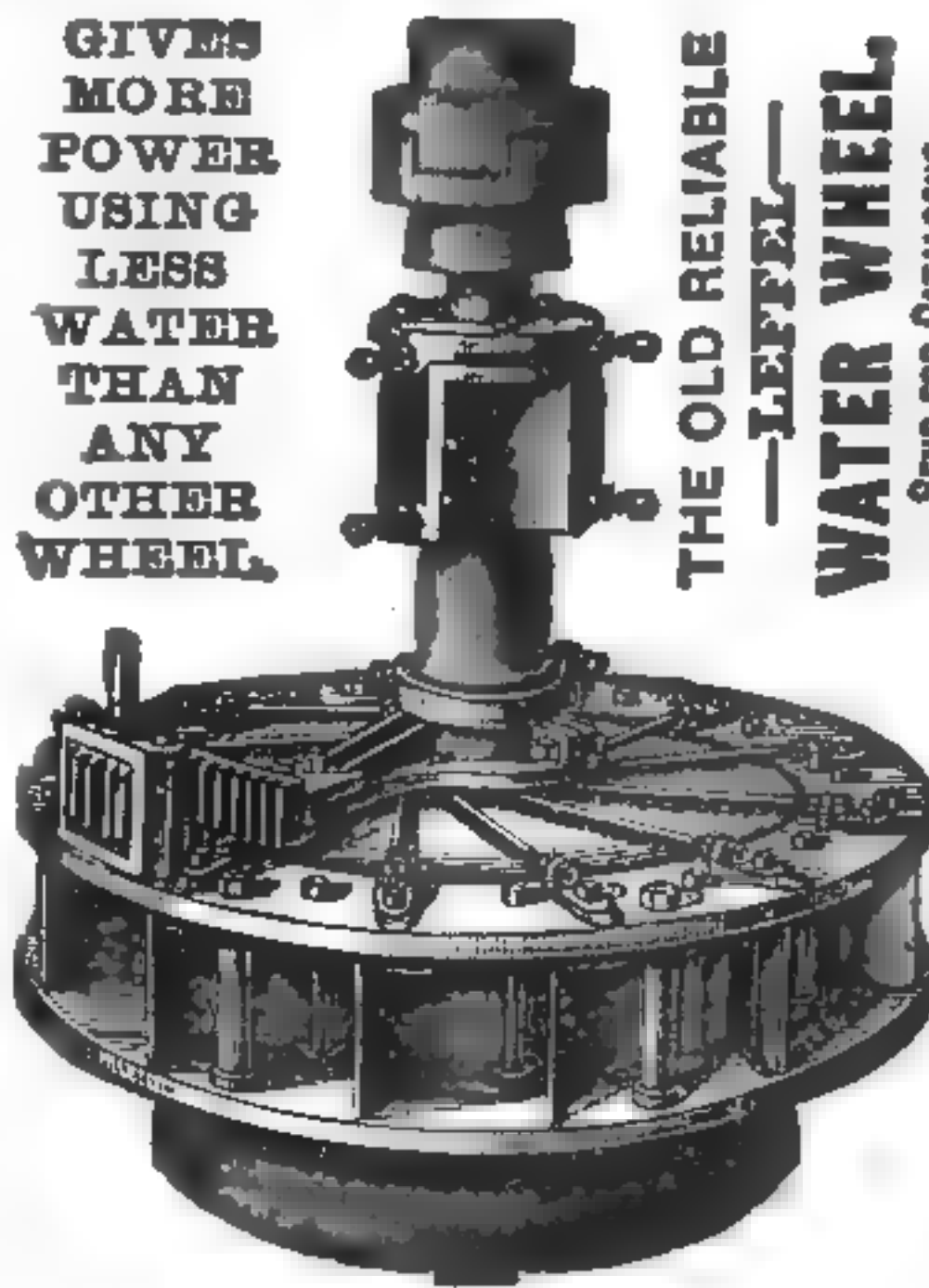
PRICE FIFTY CENTS.

Or will be sent with a copy of "THE MILLING WORLD" for one year (postage prepaid) for \$1.25.

—ADDRESS—

McFAUL & NOLAN,
 DRAWER 203, BUFFALO, N. Y.

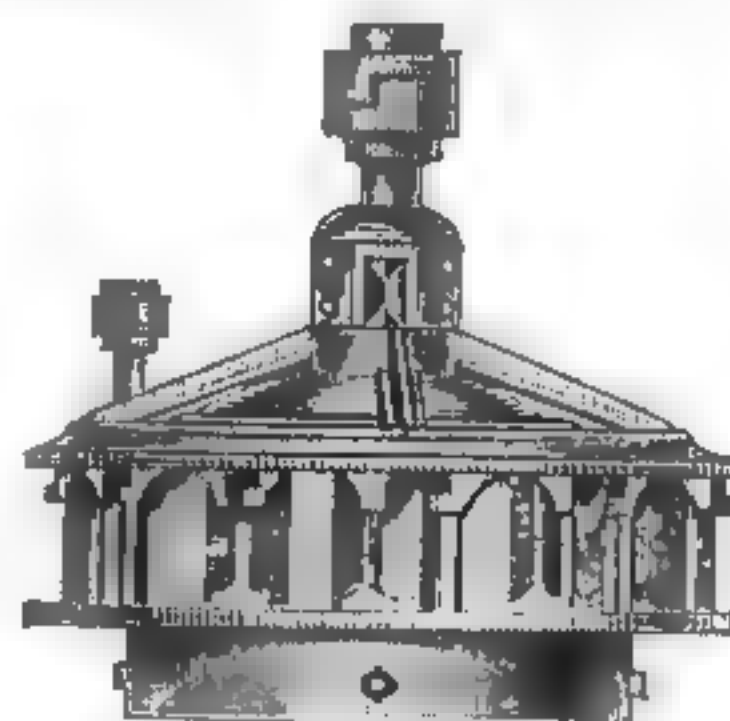
GIVES
 MORE
 POWER
 USING
 LESS
 WATER
 THAN
 ANY
 OTHER
 WHEEL.



THE OLD RELIABLE
 —LEFFEL—
 WATER WHEEL
 SEND FOR CATALOGUE
JAMES LEFFEL & CO.
 SPRINGFIELD, O., or 110 LIBERTY ST., N. Y.

THE IMPROVED "SUCCESS"
 THIS WHEEL IS BOTH DURABLE AND CHEAP
PERCENTAGE:

Full Gate..... 86.99
 3/4 Gate..... 86.07
 1/2 Gate..... 81.95



SEND FOR PAMPHLET TO

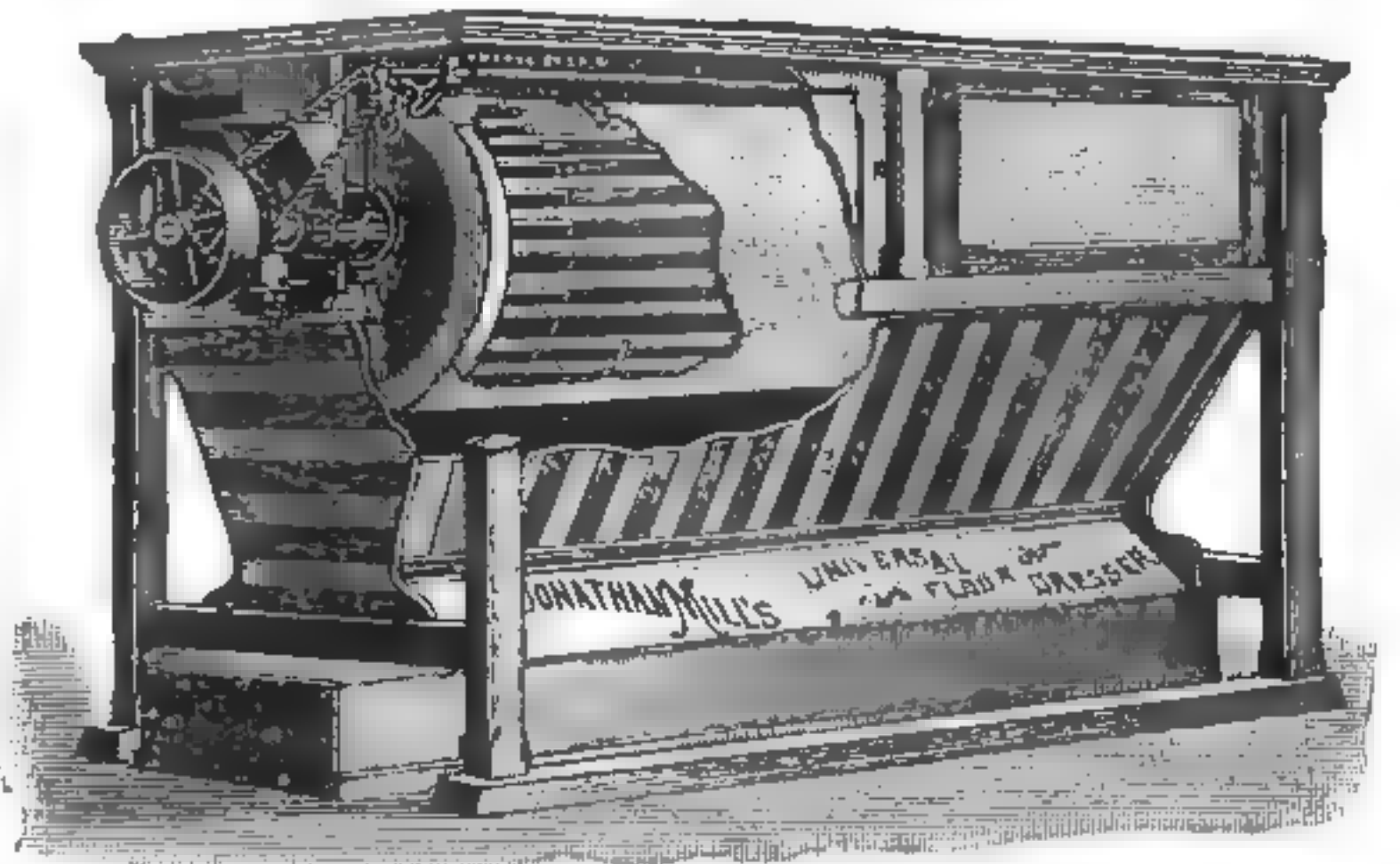
S. Morgan Smith, York, Pa.

MILLERS of the United States and Canada write us for our new pamphlet and revised price list of our **JONATHAN MILLS UNIVERSAL FLOUR DRESSER.** The best machine on the market.

Giving satisfaction everywhere in the best mills in this country. Thousands in use. We carry a full line of Crown Silk anchor Bolting Cloth and Grit Gauzes.

WE SOLICIT YOUR TRADE.

The Jonathan Mills Mfg. Co., Cleveland, Ohio, U. S. A.



New Improved Patent Head Linings.



DESCRIPTION.

These Linings are curved edgewise and flatwise, besides having the edge beveled, so as to make them fit the head and chine PERFECTLY, without springing them edgewise when nailing.

If you use them once you will have NO OTHER. No need of pounding fingers, as the ends do not have to be held down while nailing. They are much more convenient to nail and look better than any other. They are first tied in bundles of two hundred, and, when dry, are put into bales, weighing about fifty pounds each, and tied with two strong wires, to make them handle better and to prevent loosing out in transit.

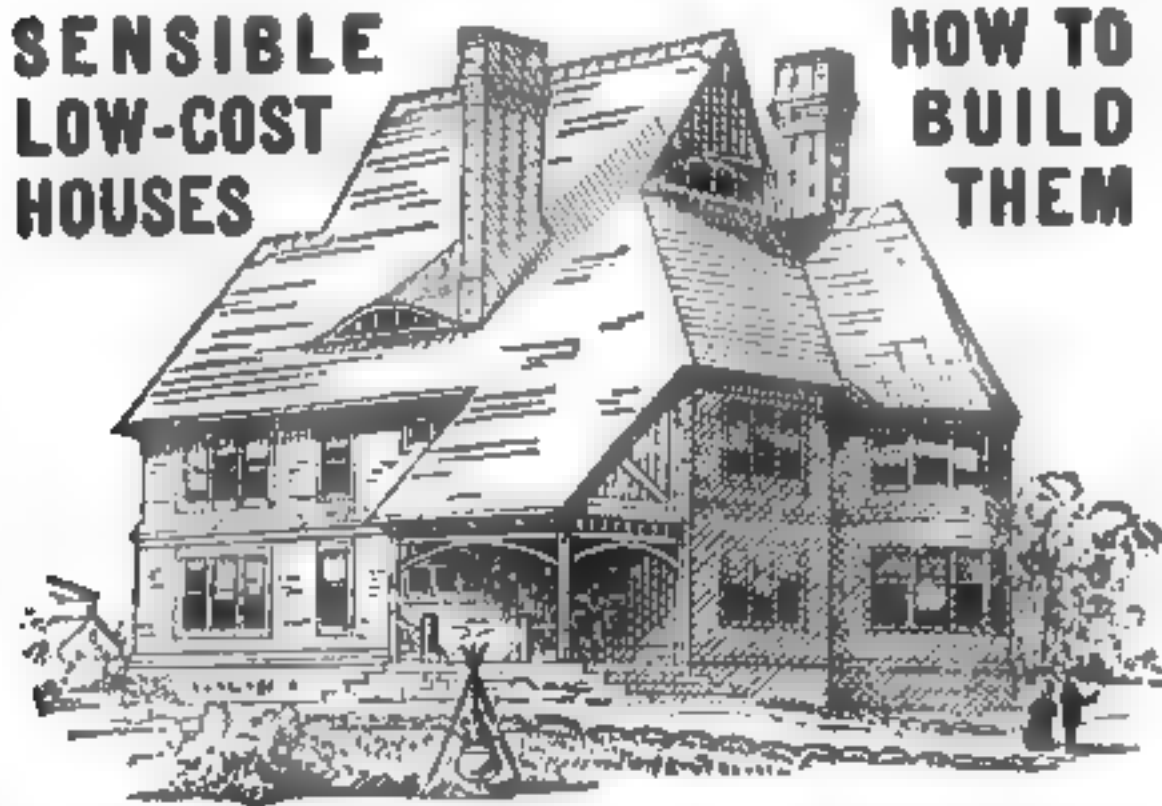
Write for prices and state about the number you use per year.

To convince you of their merit, and for the purpose of introducing them, I will ship a sample order of from five to ten thousand at a REDUCED RATE.

SEND US A TRIAL ORDER. SATISFACTION GUARANTEED.

J. H. PETERS,
Owner of Patent and Manufacturer,
COLEMAN, MICH.

SENSIBLE LOW-COST HOUSES HOW TO BUILD THEM



A large Atlas, giving illustrations and full descriptions of 56 desirable modern houses, costing from \$300 to \$1500. Every detail profusely illustrated, showing many valuable original ideas. Shows what to do and what not to do. Houses adapted to all climates described. The latest, best, and only cheap work published. Sent by mail on receipt of \$1.00. NATIONAL ARCHITECT'S UNION, PHILA., PA.

PLEASE mention THE MILLING WORLD when you write to advertisers. It will pay you to do this.

THE STEVENS PORTABLE MILLS

For CORN and FEED GRINDING

Genuine French **BUHR STONES**

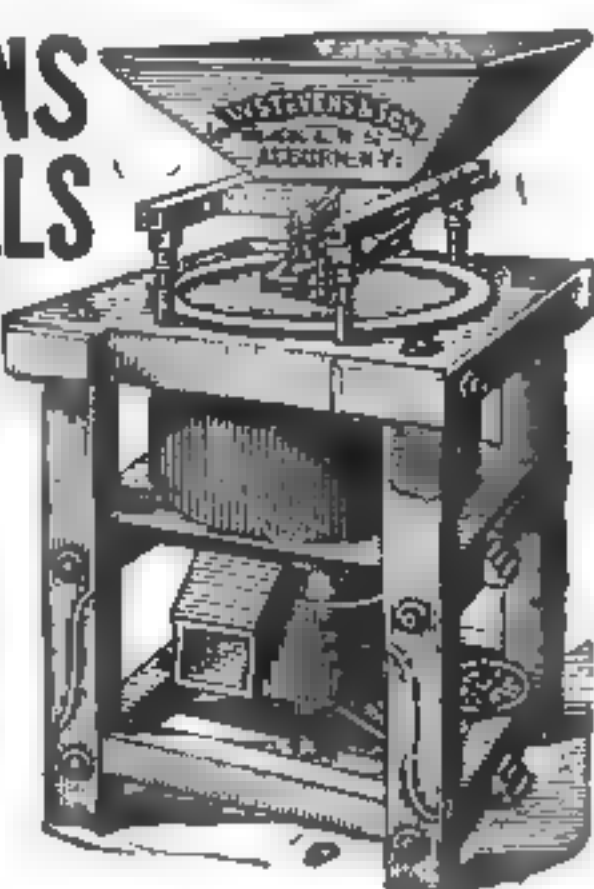
Power Corn Sheller

Prices Below the Lowest

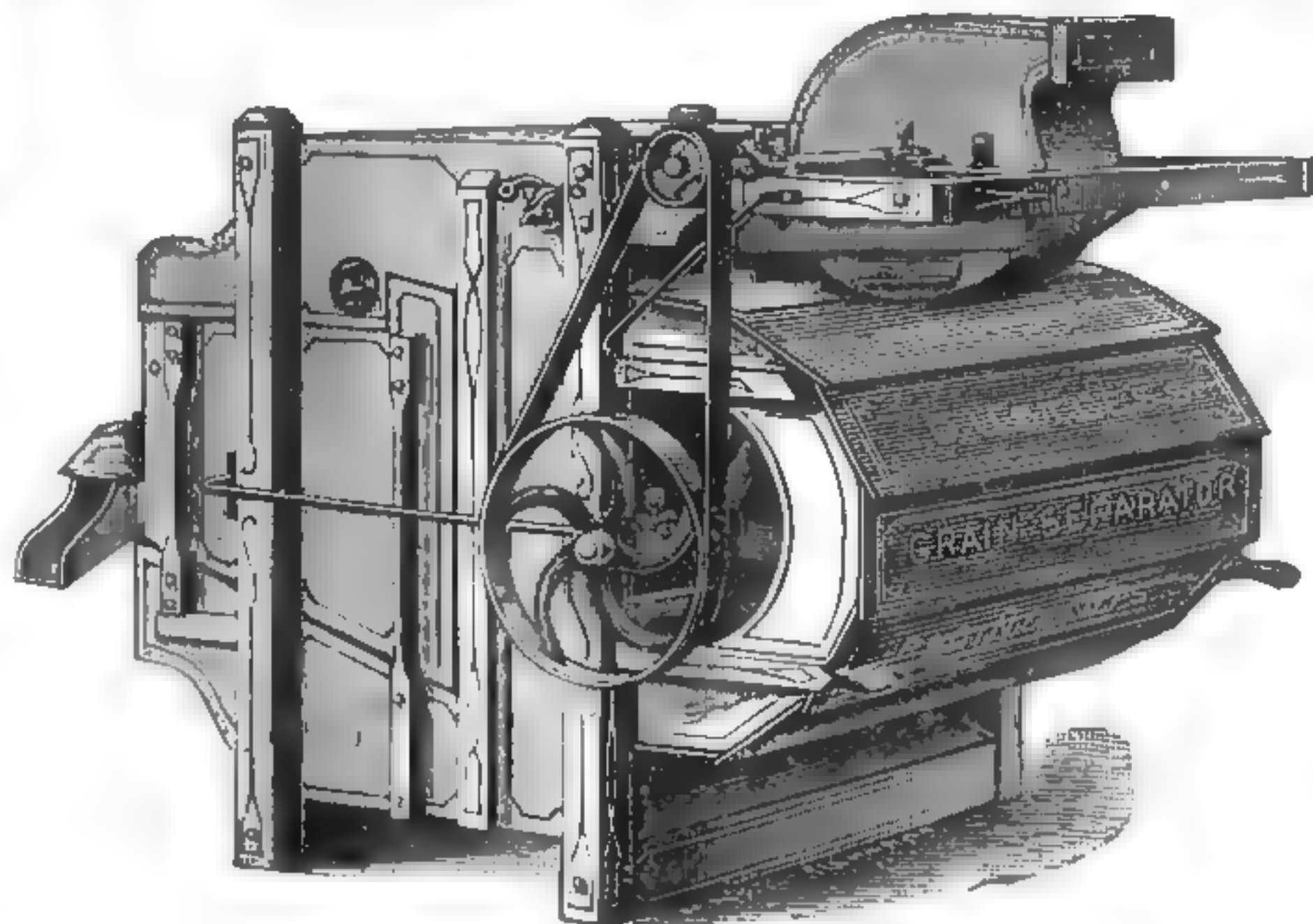
A.W. STEVENS & SON

AUBURN, N. Y.

Mention this paper.



THE "PEASE" DUSTLESS GRAIN SEPARATORS.



These Separators not only clean grain, but separate and SCREEN it. They require less space, and less power than any others, and are less expensive.

FANNING MILLS, both side shake (for hand use or power) and also the famous "Pease" end shake mills, for all kinds of grain. Various sizes—capacity 100 to 500 bushels per hour.

—THE—

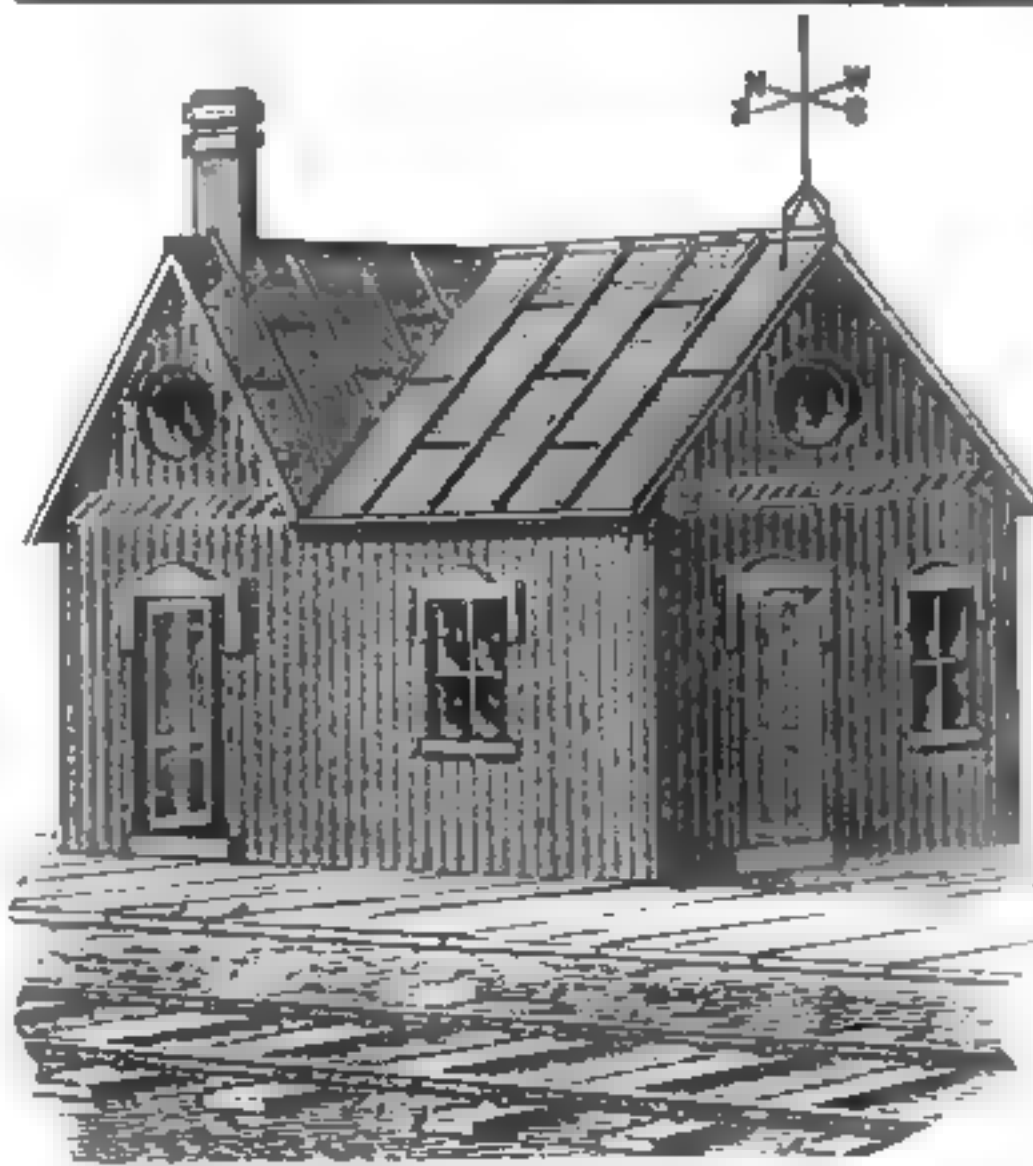
W. G. ADAMS
POWER

CAR PULLER.

Elevator Supplies of All Kinds.

For Full Descriptive Catalogues and Prices,
Address the

E. H. PEASE MANUFACTURING CO., RACINE, WISCONSIN.



Time is Money!

We execute three-fourths of all orders of day received, for we have large stocks and large facilities. You will lose no time or money by delays if you order of

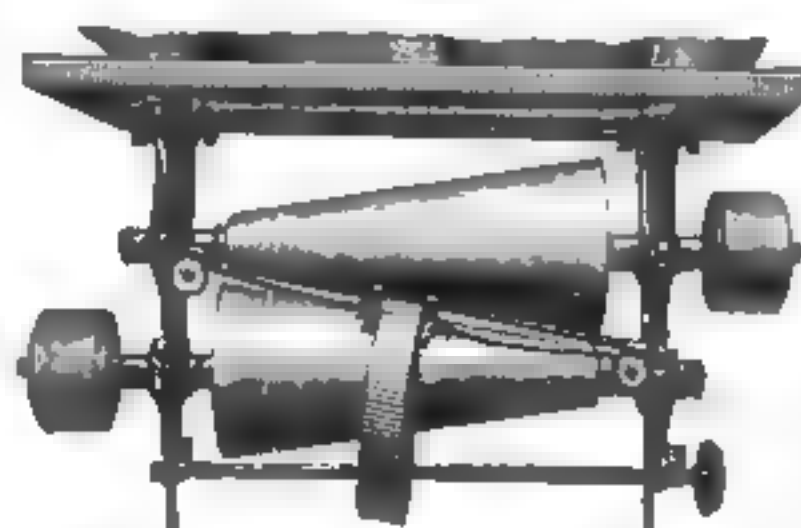
The Cincinnati Corrugating Co.

141 EGGLESTON AVENUE,

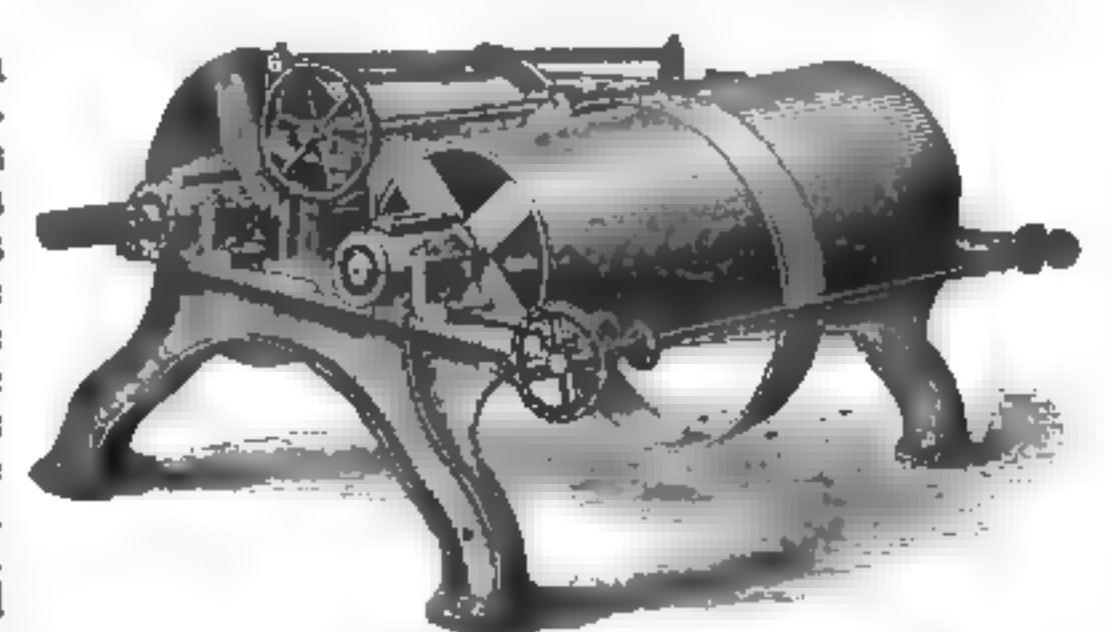
CINCINNATI, OHIO.

THE EVANS FRICTION CONE & FRICTIONAL GEARING

"PATENTED."



This cut represents a set of hanging cone pulleys. This pattern is intended for that class of machinery that stops and starts at the same speed, and at the same time be able to change the speed more or less while running. These cones are also fitted with a governor where a steady motion is required and the initial power is fluctuating. All sizes made from 1/2 Horse Power to 50 Horse Power.



SEND FOR ILLUSTRATED CATALOGUE.

EVANS FRICTION CONE CO., 85 Water St., BOSTON.

EUROPEAN ECHOES.

GREAT Britain's barley crop in 1888 yielded 68,483,000 bushels, against 65,301,000 bushels on the crop of 1887.

It is said that a great many vessels loaded with wheat which are counted in Beerbohm's "on passage" tables are ice-bound in Russian ports and can not get away for months.

DURING the first eleven months of 1888 Austro-Hungary exported via Fiume wheat and wheat flour equal to 7,672,000 bushels, against 4,159,000 bushels in the corresponding months of 1887.

FRENCH wheat of the crop of 1888 is proving to be even poorer in quality than it was at first reported to be. The millers who grind it are forced to mix in at least 25 per cent. of dry wheat from other countries.

THE formation is reported from Buda-Pesth of an association of Hungarian millers under the presidency of Herr Conrad Buchard. The milling industry has been represented as a section of the Hungarian Agricultural Association, and this is the first milling association that has been founded in Hungary on an independent basis.

SAYS the London "Miller:" Within 'the century we have had 4,000,000 acres under wheat and in a good year could produce 20,000,000 quarters, while we now have only 2,500,000 in hand, and 10,000,000 quarters is the most we can hope to produce. Next in importance, however, to the big decline comes the fact of its having been at last arrested.

SAYS the London "Miller:" The pressure of American competition on the British miller has decreased of late, but no effort should be relaxed to hold the custom, which American millers through their English agents have attacked with energy in the past and will probably on the next favorable occasion again energetically attack. It is not to be forgotten that unless English millers all over the country make flour which can hold its own with American makes, the English market may be fairly overwhelmed with American flour at a time when American exports of the unmanufactured article, wheat, are exceedingly moderate.

FOLLOWING is a table of the imports of bread-stuffs into the United Kingdom for the periods named, compiled from official sources:

Wheat.	12 months ended Dec. 31.	
	1887.	1888.
Russia.....	5,522,773	21,368,798
Germany.....	1,551,738	3,264,815
France.....	70,980	20,235
Turkey.....	1,989	182,441
Roumania.....	585,353	1,419,079
Egypt.....	197,787	729,781
U. S. Atlantic Ports.....	9,967,107	8,423,155
U. S. Pacific Ports.....	20,537,419	6,224,040
Chili.....	2,206,272	1,485,710
British East India.....	8,509,095	8,188,698
Australasia.....	1,347,151	2,315,700
British North America.....	3,964,784	1,089,080
Other countries.....	1,822,237	2,513,407
Total cwts.....	55,784,685	57,224,934

SAYS the London "Miller" of January 14: "There has been very little movement in the markets of the past week. The main news is the suspension of shipments, from frost, in the chief Russian ports. Odessa is beleaguered by ice several feet in thickness, and temporarily all shipments are interrupted. The other news affecting the wheat trade is the report of rain in harvest in South America and drought in parts of India. From the present outlook shipments of wheat for the next three months will be only on a very small scale, and current supplies will have to be drawn from the bulk afloat and from the good reserves accumulated in granaries. At present current offers are ample for the current demand."

LONDON Corn Exchange quotations on January 14 included the following: Old white English wheat 40 to 48s per quarter of 496 pounds; old red English 38 to 40s.; Rivetts 25 to 30s.; Norfolk white 30 to 36s.; Duluth 44 to 46s.; American red winter 41 to 43s.; Californian 42 to 43s.; Oregon 42 to 44s.; Chilian 40 to 42s.; Australian nominally 42 to 44s.; New Zealand 40 to 43s.; Bombay red 34 to 37s.; Bombay white 36 to 38s.; Calcutta white 35 to 37s.; Dantzic 38 to 44s.; Saxonska 36 to 40s.; Kubanka 36 to 40s.; new white English 30 to 38s.; new English red 28 to 36s. On the same date the flour prices in the London market were as follows: London, "top-price" brands, per sack of 280 pounds, 36s.; town whites 30 to 36s.; household English 27 to 29s.; American patent 38 to 39s.; 1st bakers' 29 to 30s.; 2d bakers' 25 to 27s.; low-grade 14 to 18s.; straight winter 25 to 27s.; patent winter 31s. 6d.; Californian 27 to 28s.; French 37s.; Hungarian 32 to 38s.; "superfine" Australian 27 to 28s.; "fine" Australian 28 to 25s. No Canadian wheat or flour is quoted.

WRITING from London, England, a correspondent in a recent letter says: It is a striking fact that, though the harvest here at home and throughout western and central Europe was deficient and the imports from the United States are so small, the price of English wheat is actually lower now than it was twelve months ago. The explanation, of course, is that the quality of the wheat is much below that of last year; 1887 was an exceptionally good wheat harvest, while the harvest of 1888 was the very reverse. That this is the true explanation is proved by the fact that the good qualities of foreign wheat are nearly a shilling a bushel higher than English wheat in the London market. It is noteworthy, too, that in spite of the bad harvest and the low price of English wheat the sowings of wheat this year are reported as very large. This is another evidence that the agricultural depression is drawing to a close, if not quite ended. Apparently the fall in rents and agricultural wages has put the British farmer in a position in which he can afford to continue the competition in the wheat market with the foreign grower.

COTEMPORARY COMMENT.

The winter-wheat millers are not so overstocked with flour as people have sometimes been led to suppose by the extensive advertisement of it. Millers in many parts of the winter-wheat country are liberal buyers of wheat. A commission firm in St. Louis writes that the millers there and in the country about there bought wheat more liberally last week than for some time in the past.—*Minneapolis Market Record*.

We know of several individuals, among these one journalist, who used their time, money and energy in communicating with millers, urging them to go to Milwaukee. The influence of these individuals, reinforced by the effort of secretaries of numerous associations, were of more value and of greater effect on the attendance than the limited circulation or personal influence of the *Northwestern Miller*. These people did their duty without the expectation of having any attention called to it. This sort of procedure, however, is no part of the policy of the *Northwestern Miller*. Where there are no thanks to it, they deal out damnation or silence. With them it is: "See what we have done; consider what you owe us; observe what wonderful fellows we are." Again it is: "Notice our versatility, our wit, our method, our every thing that is superior and exalted. Observe, O, observe! However, in the course of your observations, be very careful; we have many toes; they extend in all directions; they are exceedingly tender and if stepped on cause great pain. Admire the toes all you please, but be very careful." To any one who knows the *Northwestern Miller*, is our portrait overdrawn?—*The Millstone*.

Buffalo elevators threaten to shut down in the spring if the courts will not let them run their business to suit themselves. If they depend on the wheat they will get after navigation opens for dividends they might as well shut down. The early spring and summer movement of wheat from lake ports will be small enough this year.—*Chicago Daily Business*.



RELiance OIL & GREASE CO., CLEVELAND, O.,

— MANUFACTURERS OF —

Finest Lubricants for Milling Plants. A Challenge to the World.

WRITE US.

"VALVE OLEINE"—675 Degrees Fire Test, Cylinder Oil.

"RUSSIAN"—Engine and Machine Oil.

"CHIEF"—Roller Mill Lubricant.

"ANCHOR"—Roller Mill Grease.

"NIAGARA"—Belt Grease.

"CHELSEA"—Scale Solvent, Best on Market.

Agents Wanted.

FREE—SAMPLES, CATALOGUE, AND ALL INFORMATION.

SPECIAL
HIGH GRADE
PRODUCTS



MOORE'S PATENT BARREL HEATER.

For all
kinds of coop-
erage. Thousands
in use in all parts of the
U. S. Send for Circular.

JOLIET STOVE WORKS JOLIET ILL.



STANDARD SCIENTIFIC BOOKS.

THE PUMP CATECHISM—By Robert Grimshaw, M. E. A Practical Help to Runners, and Makers of Pumps of any kind. Just out. In cloth, one volume. Price postpaid..... \$1.00

A TREATISE ON FRICTION AND LOST WORK IN MACHINERY AND MILL WORK—By Robt. H. Thurston. Containing an explanation of the Theory of Friction and an account of the various lubricants in general use, with a record of various experiments to deduce the laws of Friction and Lubricated Surfaces. Copiously illustrated. 8 vo., cloth... \$3.00

KNIGHT'S MECHANICAL DICTIONARY—By Edward H. Knight, A.M., L.L.D. A book for all persons who make, buy, sell, use or want to know anything about tools or machines, now complete in four volumes, bringing the record down to this time. Sheep; 4 volumes... \$31.50

THE AMERICAN HOUSE CARPENTER—By R. G. Hatfield, (1889). A Treatise on the art of Building, comprising styles of architecture, strength of materials, theory and practice of construction of floors, framed girders, roof trusses, stairs, doors, windows, mouldings and cornices. Numerous fine wood engravings. 8 vo., cloth..... \$5.00

A MANUAL OF CATTLE FEEDING—By H. P. Armsby, Chemist of the Connecticut Agricultural Experiment Station. With plates; 12 mo., cloth..... \$2.50

A TREATISE ON TOOTHED GEARING—By Howard J. Cromwell. 12 mo., cloth. Complete Instructions for Designing, Drawing and Constructing spur Wheels, Bevel Wheels, Lantern Gear, Screw Gear, Etc., Etc.... \$2.00

STEAM ENGINE CATECHISM—By Robert Grimshaw. A Series of thoroughly practical questions and answers arranged so as to give to a young engineer just the information required to fit him for properly running an engine. 18 mo., cloth..... \$1.00

THE WINDMILL AS A PRIME MOVER—By A. R. Wolf, M. E. Comprehending everything of value relating to windmills, their use, designs, construction, etc. With many fine illustrations. 8 vo., cloth..... \$2.00

BOOKKEEPING & ACCOUNTANTSHIP—By Thomas Jones. For self-instruction or office reference. Based on twenty years experience in teaching. 8 vo., cloth..... \$3.50

THE ARCHITECT AND BUILDERS POCKET-BOOK—By F. E. Kidder. With original tables and valuable information for architects, builders, engineers and contractors. Fully illustrated. In Pocket-Book form. Morocco..... \$3.50

Any book extant at lowest prices. Great inducements to parties collecting libraries.

McFAUL & NOLAN, BUFFALO N. Y.

WIRE BOLTING CLOTH—STEEL, BRASS & TINNED

—[ESTABLISHED 1844]—

Exclusive Manufacturers of the

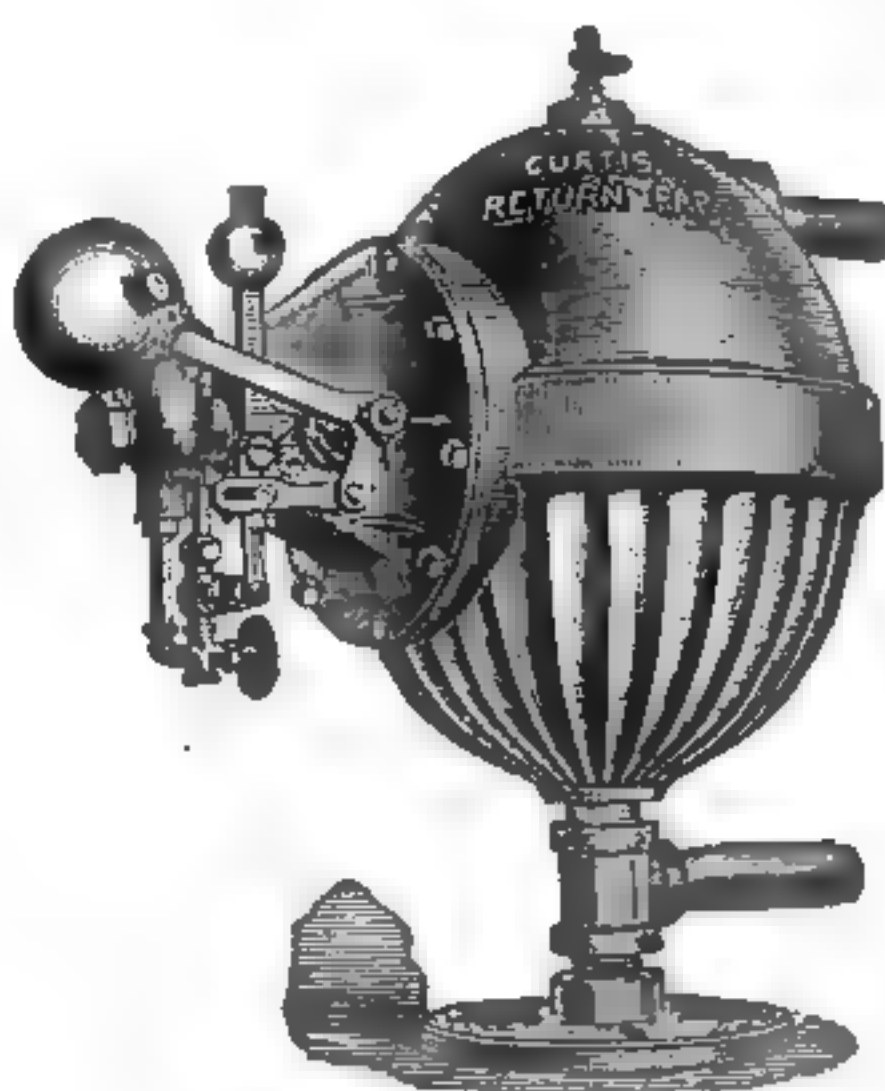
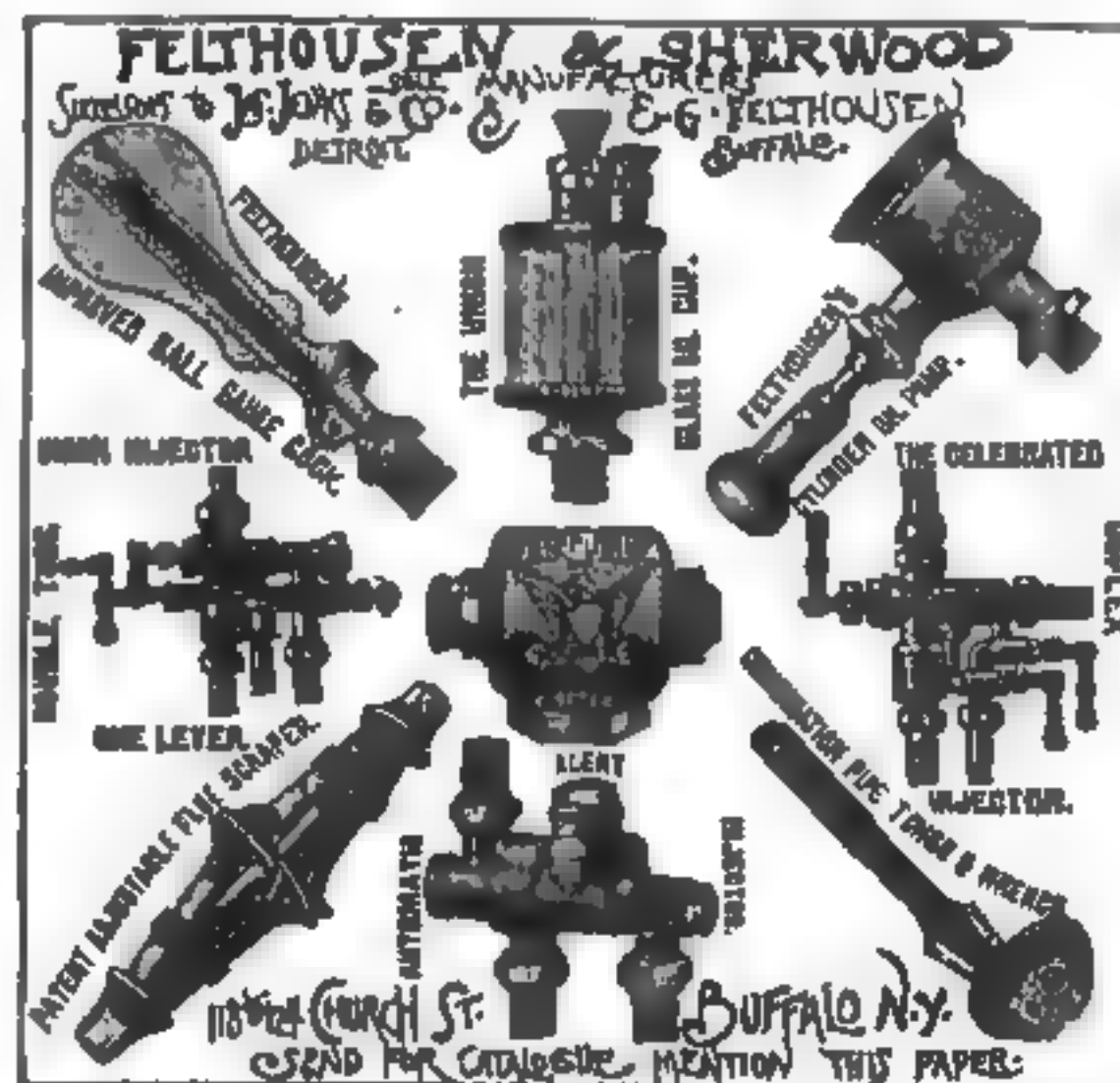
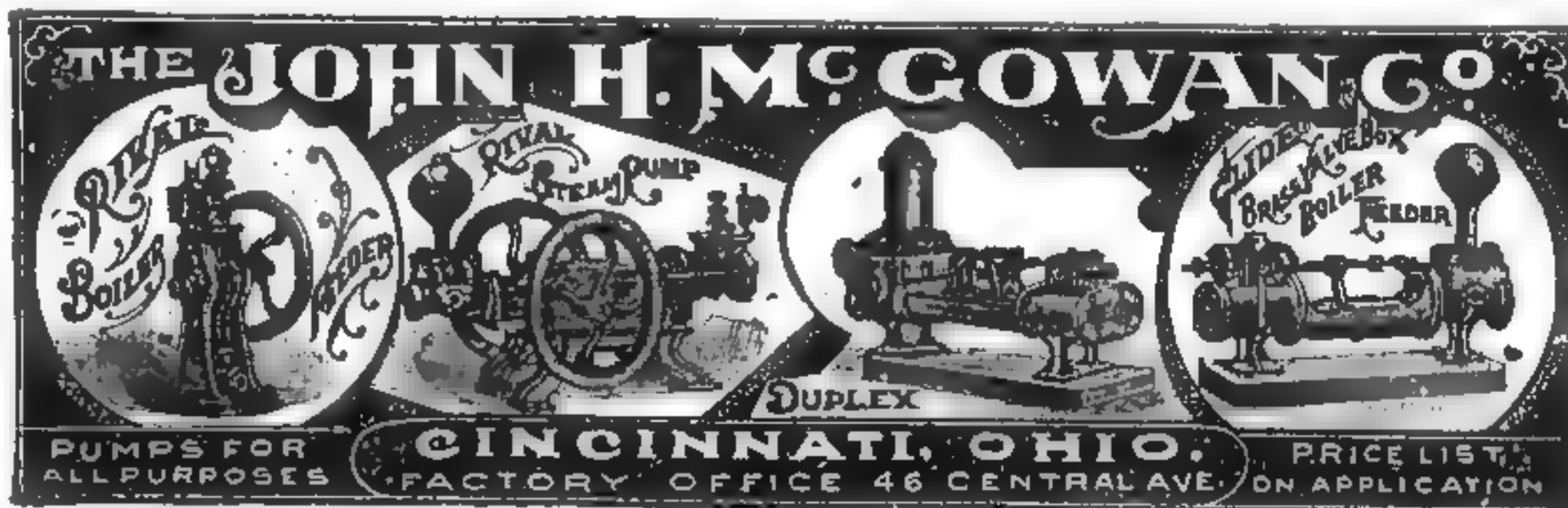
"ACME" STEEL TEMPERED BATTERY & BOLTING WIRE CLOTH.

Also manufacturers of Bran Duster Cloth, Plated Wire Mill Screen Cloth, Smut Cloth, Brass and Copper Wire Cloth. A full line constantly on hand. Send for samples and price lists.

Brooklyn Wire Cloth Works.

NO. 107 JOHN STREET, NEW YORK.

CLOTHS MADE UP WITH PATENT BINDING WHEN DESIRED.



THE CURTIS PATENT RETURN STEAM TRAP.

It is noiseless, positive, rapid, will return all condensation back into the boiler, and works equally well in connection with reduced pressure or exhaust steam, also when the return is below the water line of the boiler.

THE CURTIS REGULATOR COMPANY,
No. 74 BEVERLY ST., BOSTON, MASS.

GENERAL AGENCIES.

NEW YORK, 109 Liberty st.

CHICAGO, 218 Lake st.

PHILADELPHIA, 2035 N. Front st.

ST. LOUIS, 707 Market st.

MINNEAPOLIS, 210 S. Third st.

NEW ORLEANS, 21 Unwer st.



OFFICE OF THE MILLING WORLD,
BUFFALO, N. Y., February 2, 1889.

On Friday of last week the markets were less active and more unsettled. Increased export prospects served to strengthen wheat slightly while the winter-wheat crop prospect tended to weaken it again. January wheat opened at 95c. and closed at 94½c. Options 3,000,000 bushels, mostly in May at 96½@99½c. January corn closed at 43½c. and oats at 31½c. Wheat flour was steady on most grades, although buyers were holding off until they should be satisfied that wheat had touched the bottom. On the whole the wheat flour market was no worse than on Thursday. The minor lines were featureless.

On Saturday covering by shorts made wheat slightly stronger. January wheat opened at 94½c. and closed at 95½c., while May again scored \$1 and June \$1.00½ at closing. Options 3,000,000 bushels. Some of the late bears were found on the bull side. The situation in the Chicago wheat market was summed up by a New York dealer as follows: "The only wheat that can now be drawn to increase the stock of 3,460,000 contract wheat in Chicago must be drawn from winter sections, as Minneapolis and Duluth offer 15@20c. higher prices for No. 1 hard, which comprises the bulk of the stock in the Northwest that will grade above No. 3; while Fairbanks nominally holds 10,000,000 to 15,000,000 short contracts, and the 3,500,000 stock of spot contract wheat, with Armour behind the deal."

January corn closed at 43½c. and oats at 31½c. Wheat flour was dull, with only small lots for jobbing trade moving. One export lot of 10,000 barrels of bakers' spring for England was reported to have been quietly taken in New York early in the week. Other small export transactions were recorded. The minor lines were unchanged.

On Monday wheat was active, opening at 95½c. for January, selling up to 96½c. and closing at 95c., with May closing at 98½c. after selling up to \$1.00½, and June closing at the same figure after reaching \$1.01. Chicago bulls made the break by turning bear in the last hours of the market. Options 5,000,000 bushels. The crop bureau reported the finding of 1,000,000 bushels of wheat in Indiana not before reported. January corn closed at 43½c. and oats at 31½c. Wheat flour was in better inquiry from British importers, who picked up some lots of straight winters and patent springs. Sales not large.

The visible supply in the United States and Canada was:

	1889.	1888.	1887.
	Jan. 26.	Jan. 28.	Jan. 29.
Wheat.....	35,595,734	41,761,081	61,884,712
Corn.....	13,227,609	7,134,733	16,251,898
Oats.....	8,120,300	5,510,335	4,733,373
Rye.....	1,634,414	332,178	443,185
Barley.....	2,373,766	2,995,788	2,345,755

On Tuesday there was a repetition of the regulation stronger opening and weaker closing. The opening was strong because the decrease in the amount on passage was nearly 2,000,000 bushels, but the Chicago speculators unloaded and loaded until all the small fry were afraid to move either way. January wheat closed at 94c. and May and June at 97½c. Options 6,250,000 bushels in New York. Exporters took some wheat at the lower prices. January corn closed at 44c. and oats at 31c. Wheat flour was generally dull and unchanged. Buyers were kept out by unsettled and irregular wheat market. Export demand was small. The minor lines showed little change or activity.

On Wednesday there was less activity but more firmness in the markets. European reports announced the breaking of the ice block-

ade at Odessa and the release of 70 steamers for loading with grain. January wheat opened at 94c. and closed at 94½c. Options 3,000,000 bushels. January corn closed at 43½c. and February oats at 31½c. Wheat flour was dull and unchanged. Sales were moderate. Exporters did little, either in grain or flour. The other lines were quiet.

On Thursday the tendency was again downward, under heavy realizing. January wheat ruled at about 94½c. and February opened at 94½c. and closed at 93½c. Options 2,400,000 bushels. Exporters were idle. February corn closed at 43½c. and oats at 31½c. Buckwheat grain was nominally 58c. Rye was 56@57c. for Jersey and Pennsylvania on track, 60c. on track bid and 65c. asked afloat for No. 1 State. Barley was weak at 75@76c. for 2-rowed, 77@79c. for 6-rowed, and 77½@85c. for the whole range of Canada. Malt was nominal. Mill-feed was dull at the following quotations; 55@75c. for the whole range of 40, 60 and 90lbs. spring and winter; 80@85c. for 100 lbs; 90c. for sharps; 80c. for rye; screenings, 50@80c; oil-meal, \$1.45@1.50; cotton meal, \$1.25@1.28; barley meal, 90c. nominally for the latter.

Wheat flour was generally unchanged, with the trade in hand-to-mouth shape all around. Buyers are looking for a big break in wheat, which will bring lower prices for them. The quotations were as follows:

SPRING FLOUR.

	Sacks.	Barrels.
No grade.....	\$1.90@2.15	\$....@....
Fine.....	2.15@2.40	2.50@2.80
Superfine.....	2.65@3.10	3.20@3.35
Extra No. 2.....	3.30@3.45	3.45@3.65
	New. Old.	New. Old.
Extra No. 1.....	3.70@4.40	3.80@4.40
	New. Old.	New. Old.
Clear.....	3.90@4.65	4.40@4.90
Straight.....	5.15@5.65	5.65@5.90
Patent.....	5.75@6.40	6.25@6.80

WINTER FLOUR.

	Sacks.	Barrels.
No grade.....	\$1.90@2.15	\$....@....
Fine.....	2.50@2.75	2.70@2.90
Superfine.....	3.15@3.30	3.25@3.40
Extra No. 2.....	3.30@3.45	3.60@3.80
Extra No. 1.....	3.70@4.65	3.90@5.40
Clear.....	4.20@4.50	4.40@4.80
Straight.....	4.90@5.15	4.90@5.50
Patent.....	5.15@5.50	5.30@6.15

CITY MILLS.

W. I. grades.....	\$5.00@5.15
Low grades.....	2.35@2.75
Patents.....	5.90@6.65

Rye flour was steady and in fair demand at \$3, the range being from \$2.90@3.10 for common up to jobbing lots. Buckwheat flour was dull at \$2.00@2.10. Corn products were in moderate demand at the following quotations: City coarse meal in bags, 80@85c.; fine yellow, \$1.00; fine white, \$1.05; coarse, 83@85c.; fine yellow, \$1@1.03; fine white, \$1@1.05; Western and Southern in barrels, \$2.85@2.90; Brandywine and Sagamore, \$3.00; granulated, \$3.00@3.30; grits, \$2.75@3.00; corn flour, \$3@3.25; hominy and samp nominal.

BUFFALO MARKETS.

FLOUR—City ground—Patent spring, \$7.25@7.50; straight Duluth spring, \$6.75@7.00; bakers' spring, \$5.25@5.50; red winter \$6.00@6.25; white winter, \$6.00@6.25. Western—Patent spring, \$7.25@7.50; straight Minnesota, \$6.75@7.00; Minnesota bakers, \$5.25@5.50; red winter, \$6.00@6.25; white winter, \$6.00@6.25; low grade flour, \$4.00@4.50; Graham flour \$6.00@6.25; rye flour, \$4.80@4.25 per bbl.; buckwheat flour, \$2.75 per 100 lbs. OATMEAL—Akron, \$6.45; Western, \$6.20 per bbl. CORNMEAL—Coarse, 90c.; fine 95c.; granulated, \$1.75 per cwt. WHEAT—Chicago May advanced ½c, opening at 97c and closing at 97½c; at one time the quotation was down to 96½c, when 1,500 bu new No. 1 hard were sold here at 23c over, or at \$1.19½; 2 carloads No. 2 northern were also sold at \$1.11½ and 1 do do at \$1.12½. Closing quotations; Old No. 1 hard \$1.20½; new No. 1 hard, \$1.20½; No. 1 northern, \$1.12½; No. 2 northern, \$1.07½; winter wheat closed

firm; sales 5 carload No. 2 red at \$1.02; 1 do do at \$1.08; 2,000 bu No. 3 red at 89c; 1 do do No. 3 extra red at \$1.00, and 1 do No. 3 extra red at \$1.00, all on track. CORN—Quiet, but firm; sales 1 carload No. 3 at 87½c. 4 do No. 3 yellow at 38c, and 1 do No. 4 at 37c. all on track; No. 2 yellow offered at 41½c in store. OATS—Dull; holders firm; sales 2 carloads No. 3 white at 28½c, and 1 do mixed at 28½c. on track; No. 2 white held at 31½c, all on track. BARLEY—Quiet; No. 1 Canadian, 78@80c; No. 2 do, 75c; No. 3; 68@70c; a few outsiders and peddlers are offering small lots at a decline of 1@2c from the foregoing quotations. RYE—No. 2 nominal at 54c. RAILROAD FREIGHTS.—To New York, Baltimore, and Philadelphia rate points on grain flour, and feed, 13c, per 100 lbs; to Albany and West Troy, 10½c; to Boston, 15½c.

Says the St. Paul, Minn., *Pioneer Press*: It is now clearly evident that some one is quietly picking up the better milling grades, either to hold on speculation or for actual consumption. It is probably the latter, as the grinding from the invisible supply has been exceeding the grinding from the visible about 400 per cent. This is a phase of the market that is ultimately to become quite a feature. In past years it has been the custom to grind from the visible and have the invisible to fall back upon in the spring and summer. This year the usual order of things has been reversed, and those who are depending upon the usual invisible supply to fill the wants of the millers next summer are building upon a foundation of sand that is slowly but surely being washed from under their structure.

Says a Lockport, N. Y., dispatch of January 18: Horace P. Smith, one of the oldest millers in the country, died here to-day, aged 91 years. He was an uncle of Mrs. Folsom, mother of the wife of President Cleveland. Mr. Smith was at one time the proprietor of the Shawmut Mills in Rochester, and for some time of the Lockport City Mills. He had boarded in this city for 25 years. His father was one of the first millers in this State. The deceased owned one of the largest Rochester mills at one time.

The Spring Wheat Millers' Association of the United States has completed its organization by electing Ed. Sanderson, of Milwaukee, president and A. A. Freeman, of LaCrosse, secretary and treasurer.



THIS WHEEL GIVES HIGH RESULTS, AND IS ACKNOWLEDGED THE BEST, MOST PRACTICAL AND EFFICIENT TURBINE MADE. FOR SIMPLICITY, DURABILITY, AND TIGHTNESS OF GATE IT HAS NO EQUAL.

State requirements and send for Catalogue to

T. C. ALCOTT & SON,
MOUNT HOLLY, N. J.

TRADERS & TRAVELERS
Accident Company
Benefits OF NEW YORK

\$5,000. for DEATH. \$5,000. for LOSS of LIMBS.
2,500. for LOSS of LIMB. 2,500. SIGHT.
1,250. TOTAL DISABILITY. 650. ONE EYE.
25% WEEKLY INDEMNITY FOR 26 WEEKS.
ONE SET OF INDIVIDUAL REGISTRY PLATES INCLUDED.

4 QUARTERLY PAYMENTS, \$250 \$1000
ANNUAL DUES. 100 5000

287 BROADWAY, N. Y.

"Cooper on Belting."

A Treatise on the Use of Belting for the Transmission of Power. With illustrations of approved and actual methods of arranging Main Driving and Quarter Twist Belts, and of Belt Fastenings. Examples and Rules in great number for exhibiting and calculating the size and driving power of belts. Plain, Particular and Practical Directions for the Treatment, Care and Management of Belts. Descriptions of many varieties of Beltings, together with chapters on the Transmission of Power by Ropes; by Iron and Wood Frictional Gearing; on the Strength of Belting Leather; and on the Experimental Investigations of Morin, Briggs, and others, for determining the Friction of Belts under different tensions, which are presented clearly and fully, with the text and tables unabridged. By JOHN H. COOPER, M. E. Second Edition. One vol., demi octavo. Cloth, \$3.50. Sent post-paid on receipt of price. Address,

McFAUL & NOLAN, BUFFALO, N. Y.

THE "HARLOW" Positive Feed Lubricators.

For Marine and Stationary Engines,
Steam Pumps, Electrical and
other Machinery.

MAXIMUM ECONOMY IN OIL.
MARKED ECONOMY IN FUEL.

Not dependent upon or
operated by Steam
Pressure, Condensa-
tion or Gravity.
Not affected by changes
of temperature.

BEING operated by
some moving por-
tion of the engine or
machine to be lubri-
cated, the "Harlow
Lubricator" starts
and stops with the
engine or machine
being lubricated, without requiring the slightest atten-
tion from the engineer or operator, always delivering the
oil in any amount from a drop to a constant stream.

The cup can be filled at any moment while the engine
or machine being lubricated is in operation, without
causing any leakage either of oil or steam.

Harlow Lubricator Mfg. Co. BOSTON, Mass.
U. S. A.

EAGLE IRON WORKS,
DETROIT, MICH.

MANFRS. OF HIGH GRADE

**HORIZONTAL, UPRIGHT
PORTABLE AND MARINE.****Oil Tanks & Smoke Stacks,****HEAVY SHEET IRON WORK.**

CORRESPONDENCE SOLICITED.

**THE BEST AND CHEAPEST
CORN AND COB CRUSHER
IN THE WORLD.**

All wearing parts cast of a steel mixture. Notice difference in construction. Most area where most work is done, where all other crushers have least area where most work is done. Low priced machinery is not the cheapest, considering durability and efficiency. Sent on 30 days' trial when satisfactory reference is furnished.

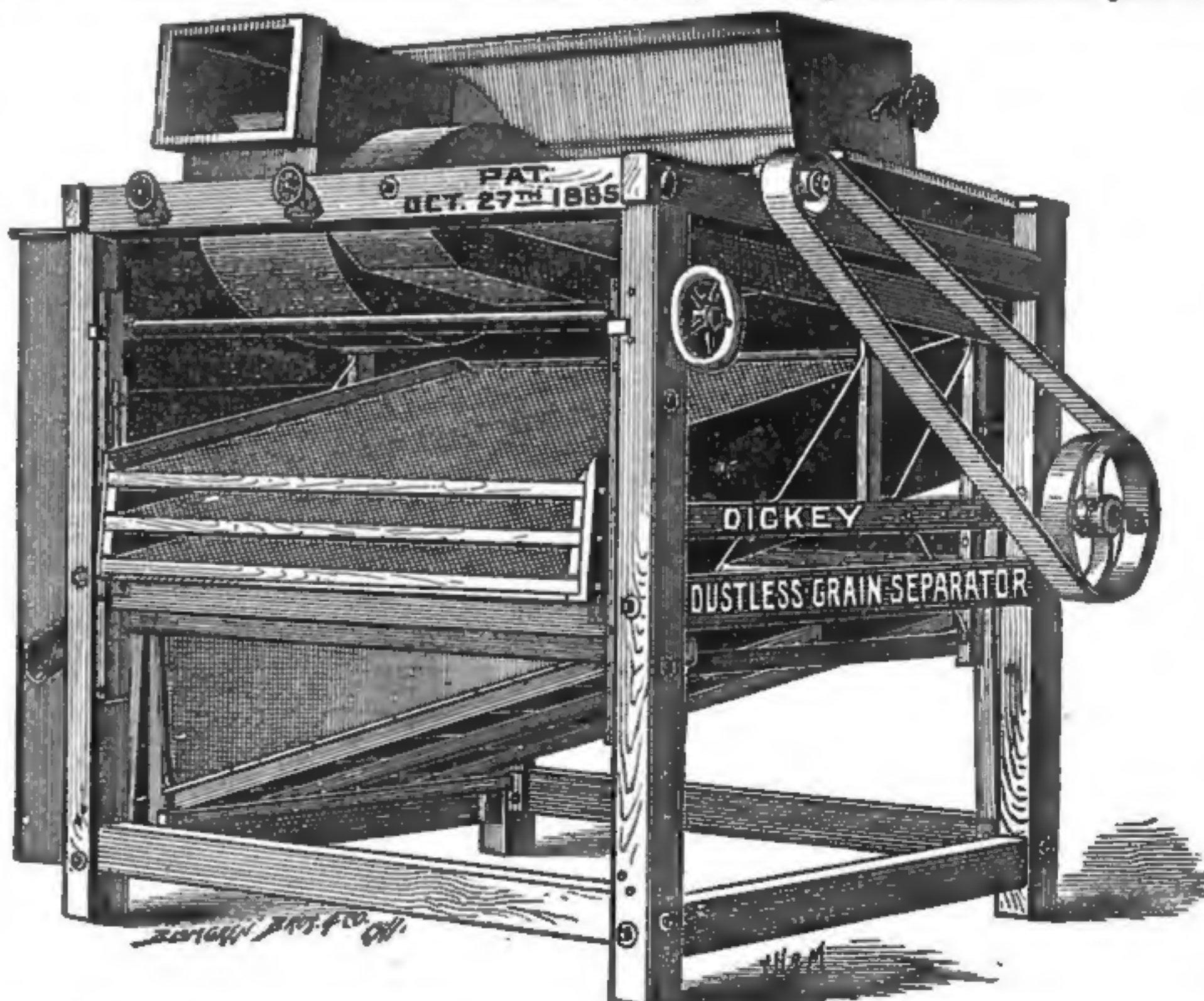
Please Send for Circulars.

R. C. McCULLEY, LANCASTER, PENN.**\$15 Will Buy the Best and Cheapest
CORN AND COB CRUSHER
IN THE WORLD!**

It can be driven either from above or below. Thousands of these Crushers are now in use throughout the United States and Canada, and are giving entire satisfaction. Send for circular, giving testimonials from millers who are using our Crusher, and know a good thing when they see it.

T. B. WOOD & SONS, CHAMBERSBURG, PA.**DICKEY DUSTLESS
GRAIN AND FLAX SEPARATOR**

This Separator is our latest and most perfect, and guaranteed to be the superior of any now on the market. This machine, as can be seen by the cut, is not a warehouse fanning mill with one patent attachment, but is a Dustless Separator, made for the express purpose of thoroughly cleaning and separating all kinds of grain in large quantities; its construction is such that the working machinery and weight is all within the parts or anchors.



WE CLAIM FOR IT SUPERIORITY.

WE CLAIM FOR IT SUPERIORITY.

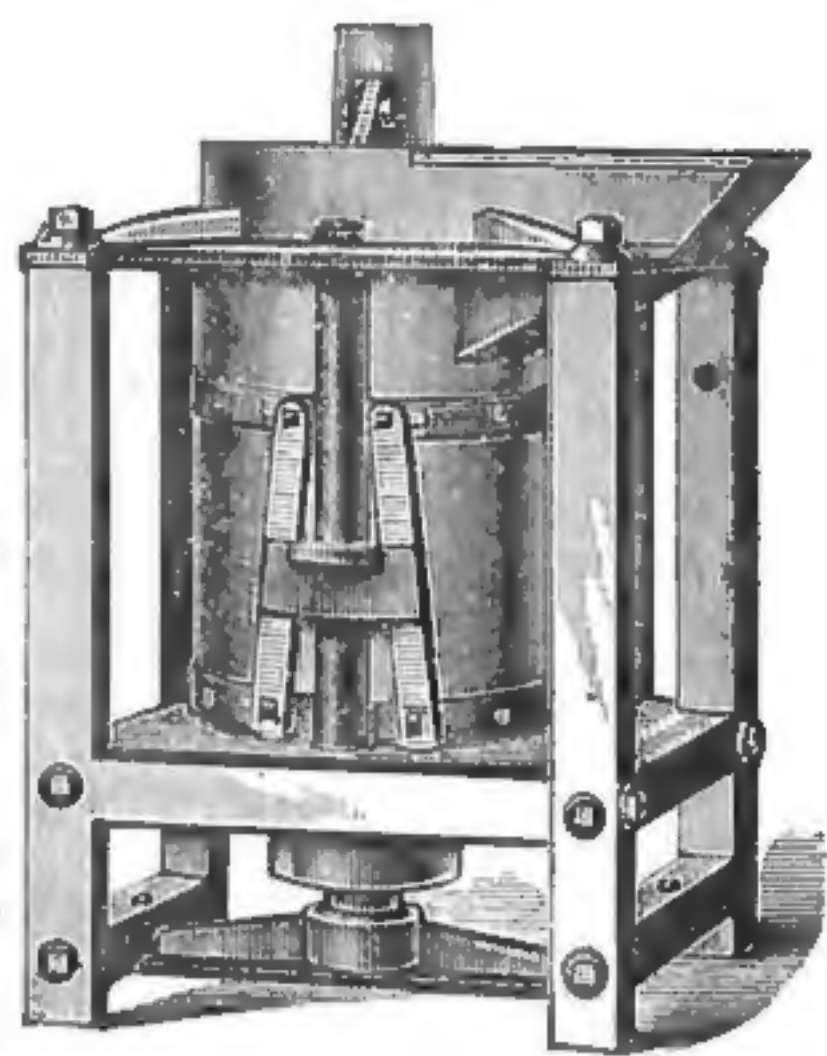
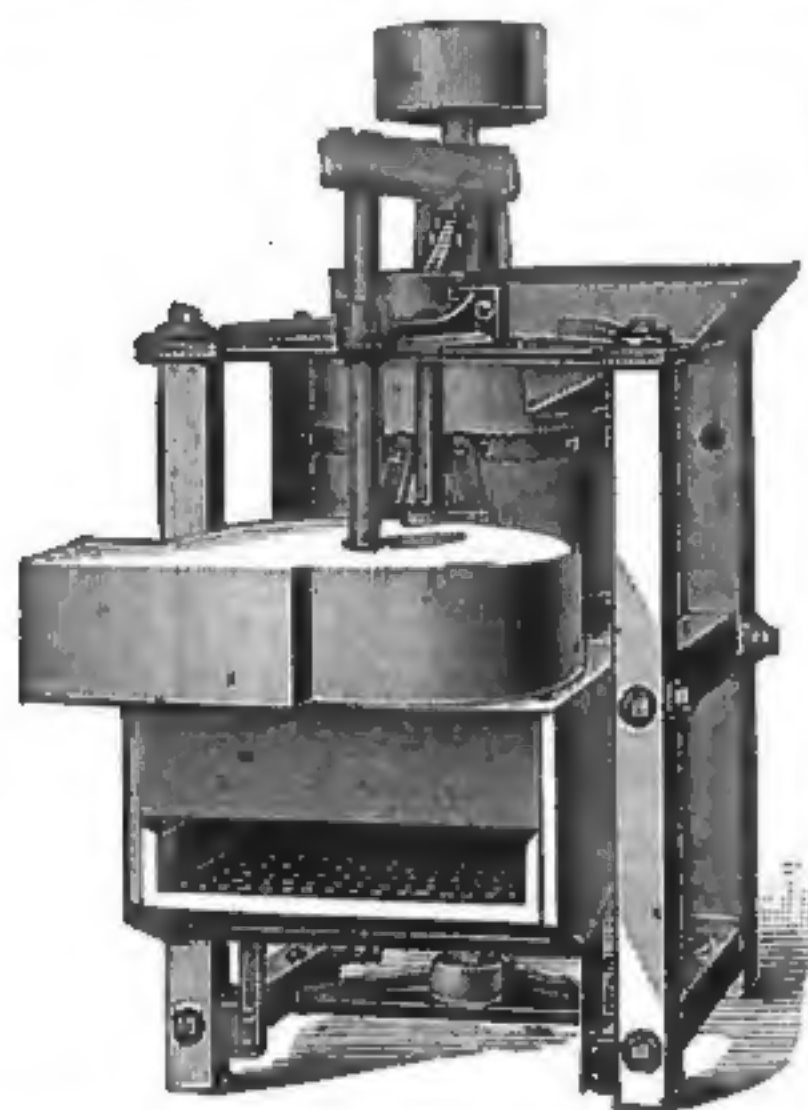
We claim for it Superiority over everything of the kind made, in simpleness, durability, saving of power, capacity and cost of construction. Its height will accommodate any number of spouts from different points, without moving machine. They have a capacity from 700 to 1,500 bushels per hour. We also control exclusively the manufacture of the celebrated Dickey Giant, End and Side Shake, Warehouse Mills, that have attained such a world-wide reputation. Sent on approval to any reliable party. For full particulars address,

A. P. DICKEY MANUFACTURING CO., Successors to **DICKEY & PEASE, RACINE, WIS.**

The LIPPOLD DUSTLESS CORN SHELLER & CLEANER

MANUFACTURED BY

The LIPPOLD MFG. CO.
ERIE, - - PENN.



THE HIGHEST CAPACITY for the LEAST MONEY.
The Best Machines for Mills and Elevators.
Machines Sent on Thirty Days' Trial.
SHELL UNHUSKED CORN AND CLEAN IT PERFECTLY.

WRITE FOR ILLUSTRATED CIRCULAR WITH PRICES.
NAME THIS PAPER.



THIS LATEST NOVELTY FREE.

Flowers large and fragrant. Color a soft, satiny-pink, distinctly striped and dashed with white and carmine. Free bloomer. Price, \$1.00, including copy of Floral Guide, if desired. Write for instructions how to get plant free.
VICK'S FLORAL GUIDE for 1889, Pioneer Seed Catalogue of America, revised, enlarged, new shape, new type, elegant cover, frontispiece, and 3 Colored Plates. Illustrations and descriptions of every popular plant, flower and vegetable, and prices of same. Only 15 cents, with certificate good for that amount in seeds. JAMES VICK SEEDSMAN, Rochester, N. Y.



H. J. DEAL

Specialty Company.

Flour and Grain Testing Appliances,
Specialties for the Milling, Flour and
Grain Trades.

BUCYRUS, O., U. S. A.

SPECIALTIES
ILLUSTRATED FOLDER "T"
FOR THE HOLIDAYS.
NOW READY.

Please write for a copy at once. Only mailed to customers and on application. This is the most complete and extensive list of specialties ever issued by us. Write at once and secure a copy.

THE H. J. DEAL SPECIALTY CO.
BUCYRUS, OHIO, U. S. A.

Chemical Fire Extinguisher Co.

38 & 40 LASALLE STREET,

CHICAGO, - - ILL.

MANUFACTURERS OF THE

Only Chemical Automatic Fire Extinguisher Made

No Freezing; No Corroding; No Leaking.
Cheapness and Absolute Reliability and Reduction in Cost of Insurance. We also manufacture everything in the line of Chemical Extinguishers, from a full 100 gallon engine to a quart Hand Fire Extinguisher, of the best and most approved kind. One gallon of our chemical is equal to 500 gallons of water.

SEND FOR ILLUSTRATED CATALOGUE.

L. L. WHITLOCK,

Advertising Agent

FOR MANUFACTURERS.

TRADE JOURNALS A SPECIALTY.

P. O. DRAWER 5323. Boston, Mass.

As Agent for Advertisers instead of Papers, I obtain the Best Rates Possible for my Customers.

* THE INK *
WITH WHICH THIS PAPER IS PRINTED
IS MADE BY THE
QUEEN CITY PRINTING INK CO.
CINCINNATI, O.

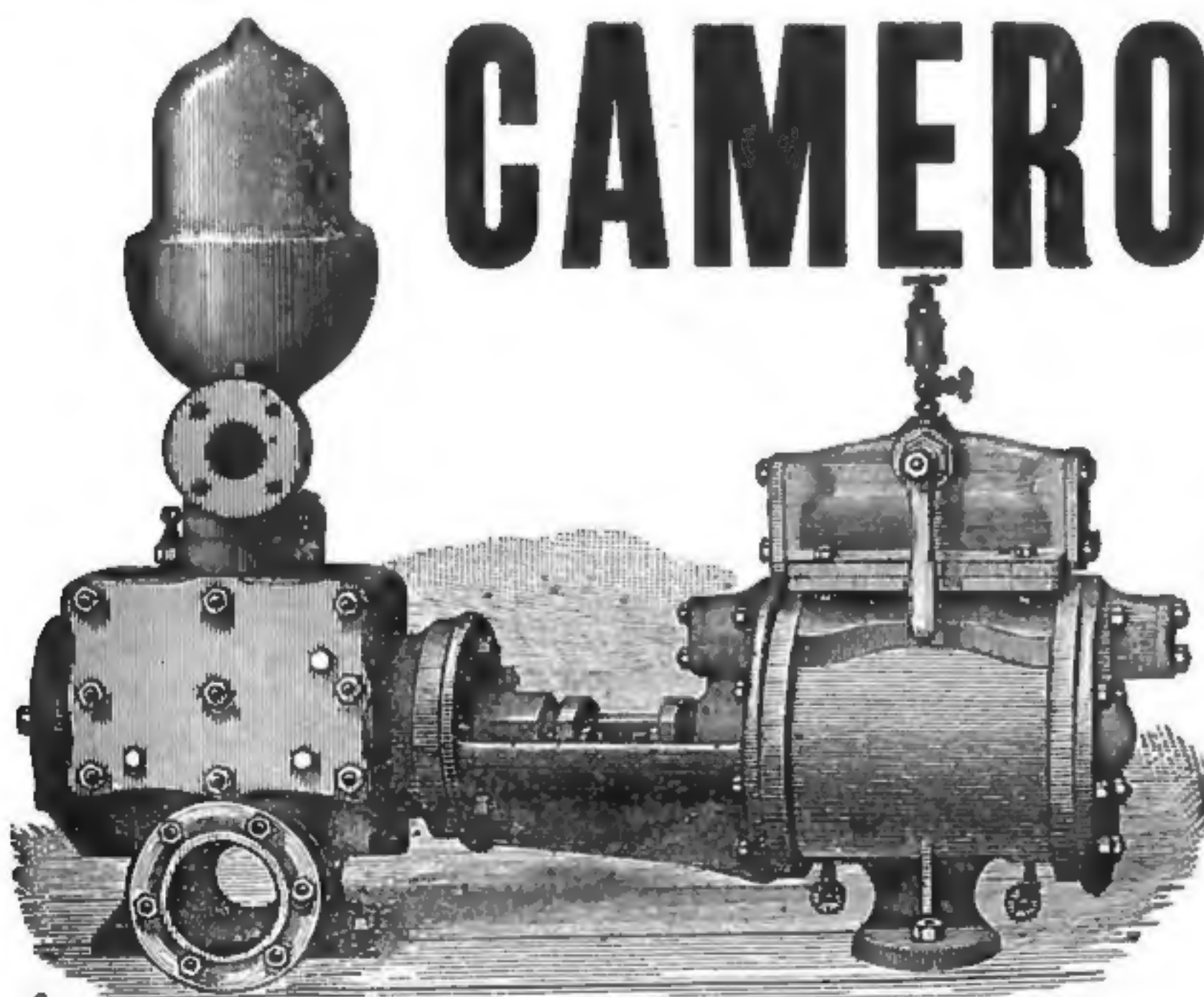
"DE MAN WOT KNOWS IT ALL
is allus a-makin' change, a-
buyin' ob experience."

The man who does not think that
he "Knows it All" about
Pumps, Steam Engines and Boilers
Can find out a great deal about
them in

GRIMSHAW'S PUMP CATECHISM - \$1.00
STEAM ENGINE CATECHISM - - - 2.00
BOILER CATECHISM - - - - - 2.00
PREPARING FOR INDICATION - - 1.00

BY MAIL POSTPAID.

McFaul & Nolan, - Buffalo, N. Y.



CAMERON STEAM PUMP

THE STANDARD OF EXCELLENCE.

SIMPLE! COMPACT! DURABLE!

"NO OUTSIDE VALVE GEAR."

Steam, Air & Vacuum Pumps in Every Variety

FOR ILLUSTRATED CATALOGUE ADDRESS

THE A. S. CAMERON STEAM PUMP WORKS

Foot of East 23d Street, - New York.

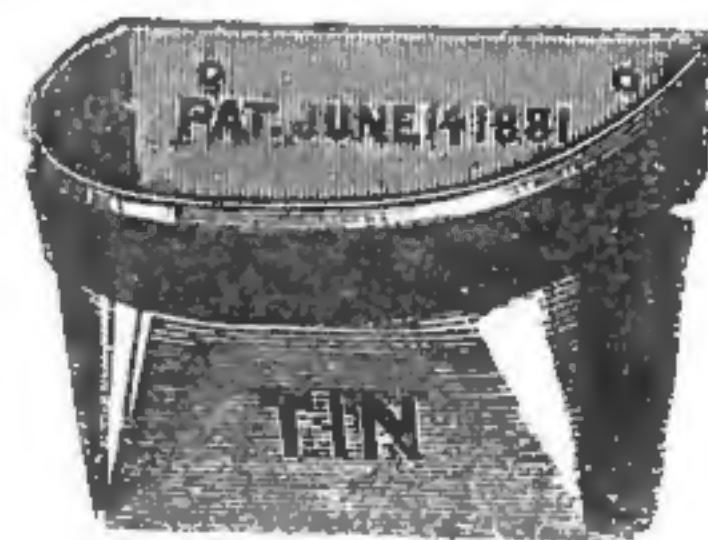


Made of sheet steel, with heavy band.

BOSS & ELEVATOR & BUCKETS.

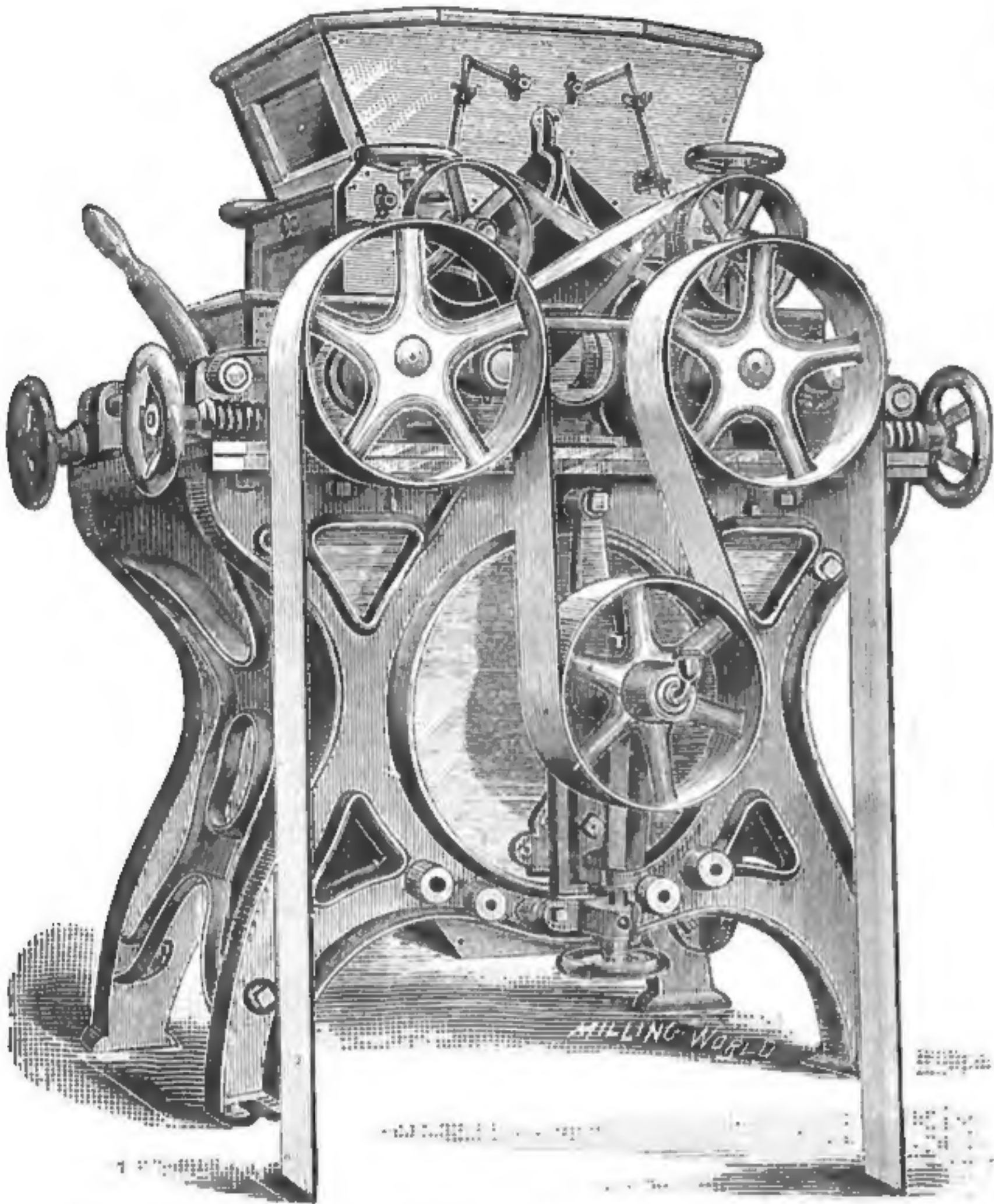
If you are interested ask for Prices. Manufactured only by
W. P. MYER, INDIANAPOLIS, IND.

16, 18 AND 20 EAST SOUTH STREET.



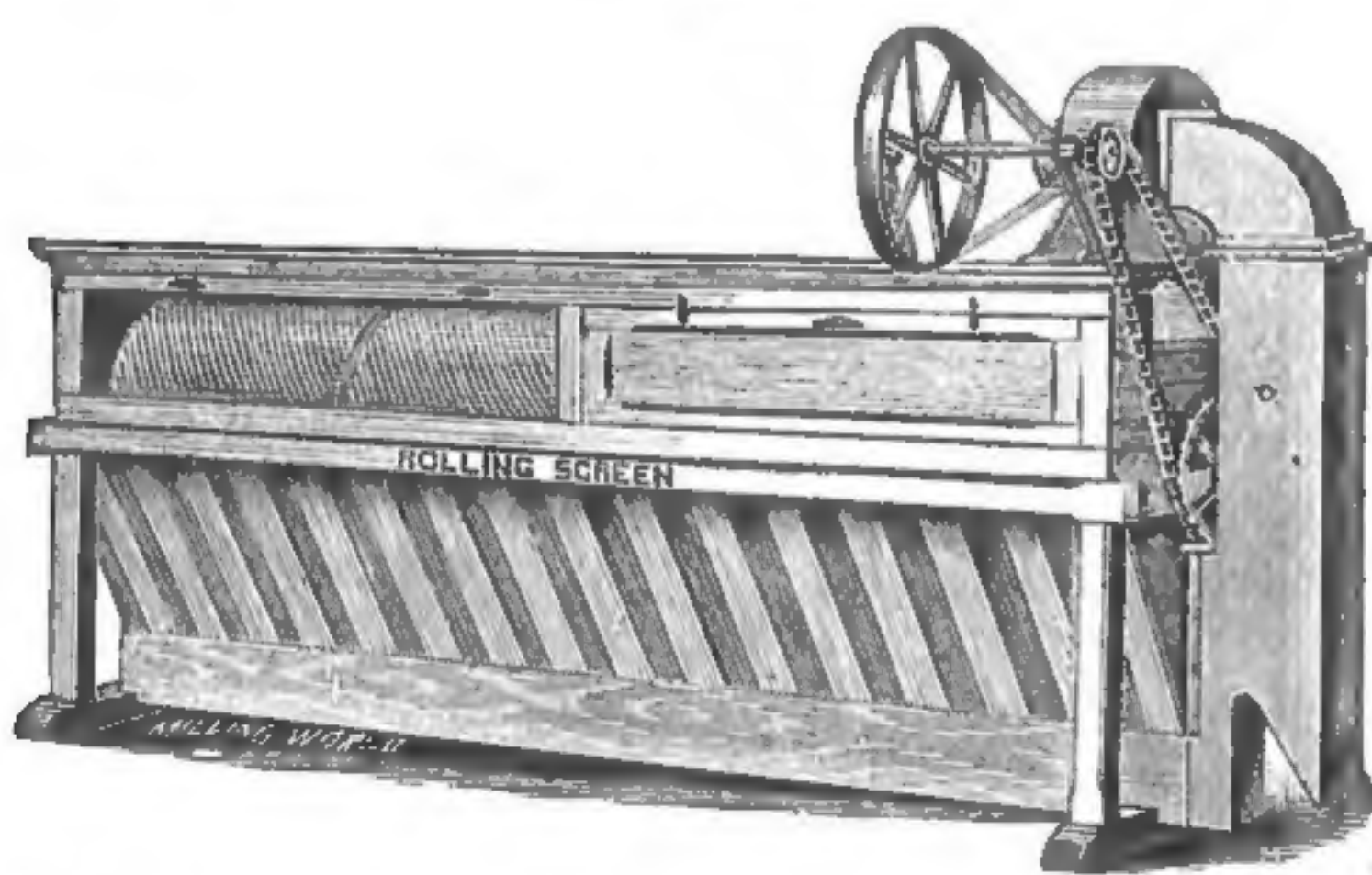
Made of tinned steel plate, with iron band.

JOHN HUTCHISON MFG. CO., Mill Builders and Mill Furnishers.



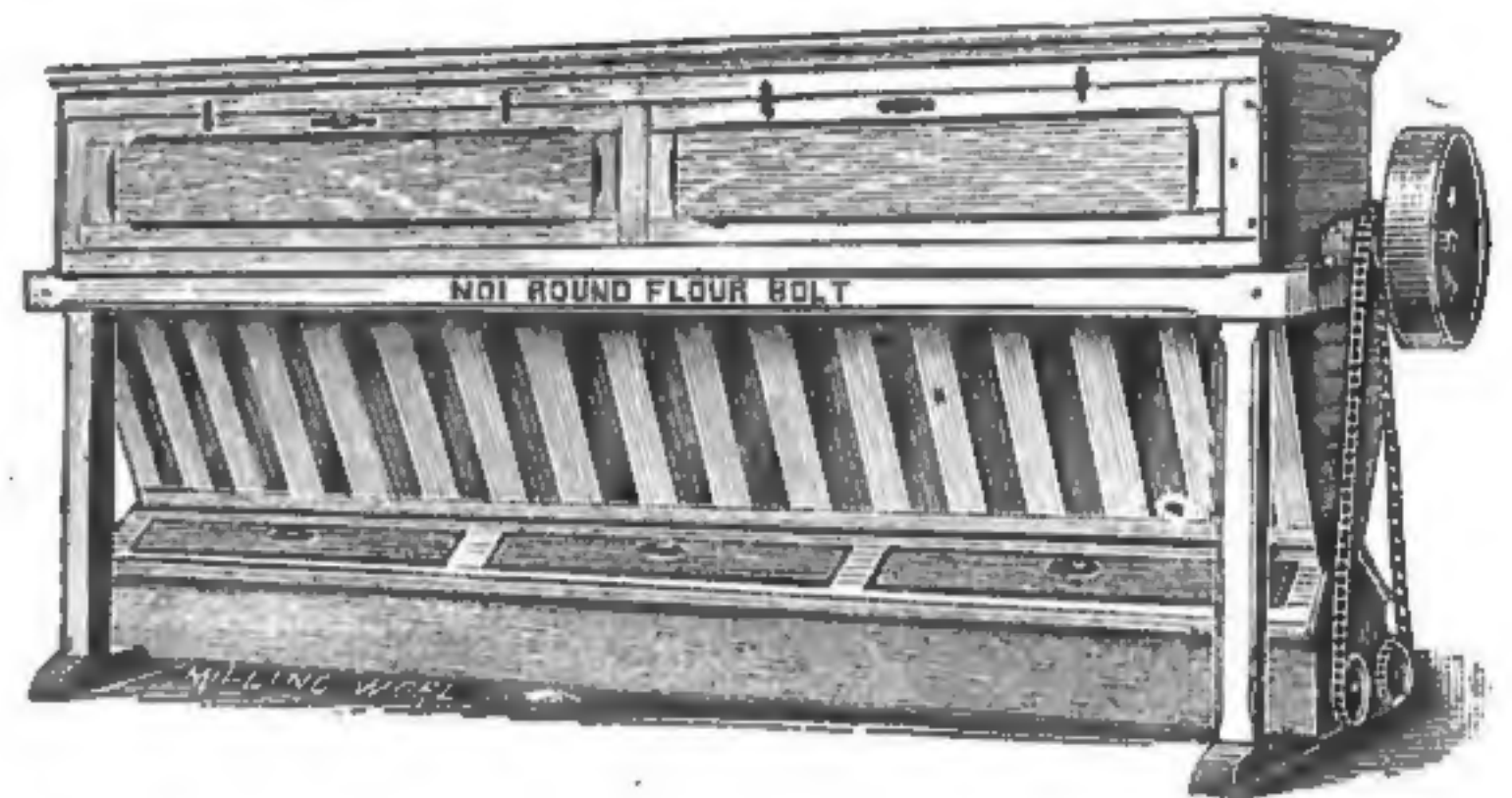
"The Rickerson." The original six inch 4 Roller Mill. We now own the patents on this mill and after greatly improving the mill manufacture them in four sizes:

6x12 inch.	6x18 inch.
6x15 "	6x20 "

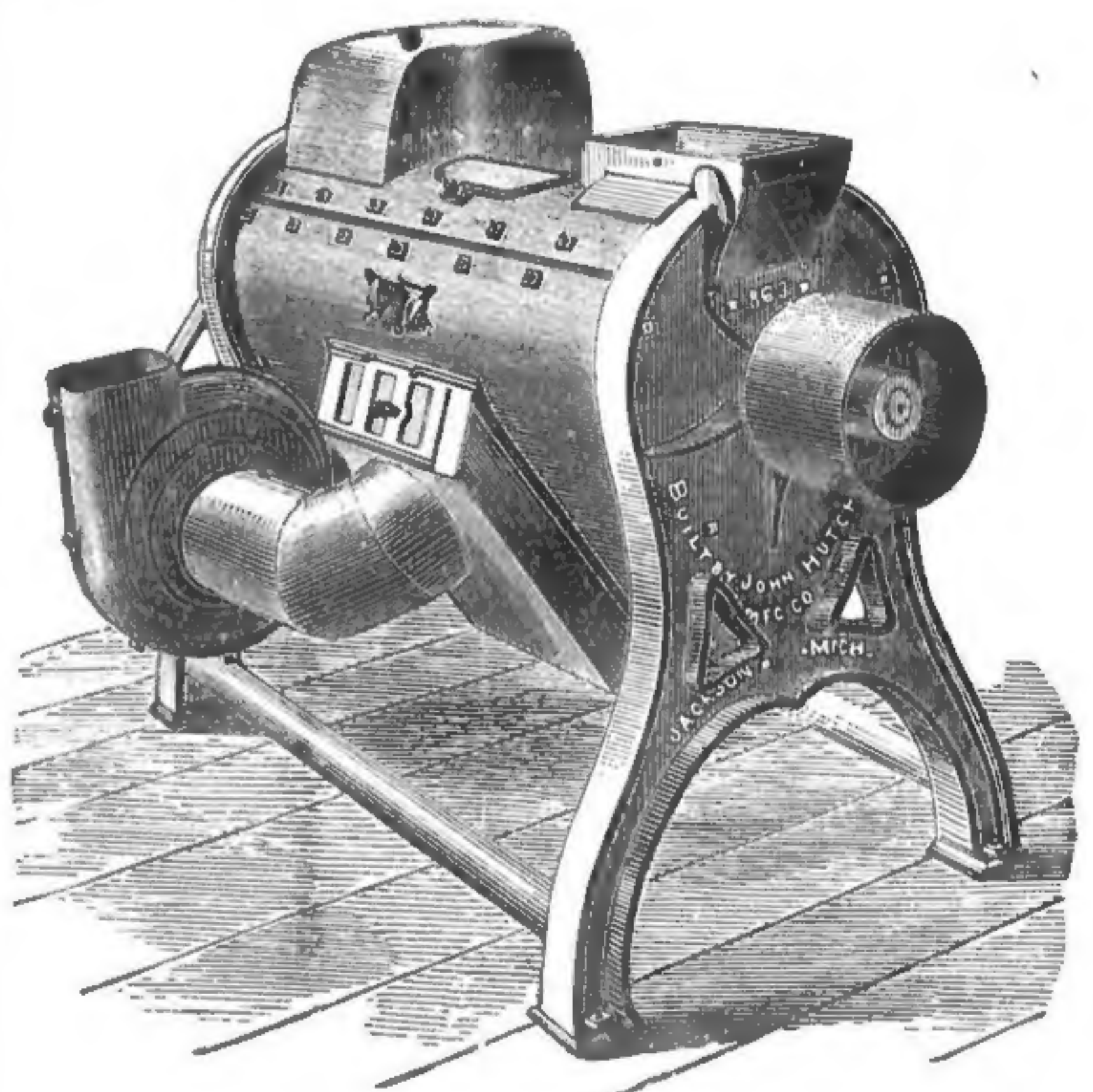


The above cut represents our New Rolling Screen, which is absolutely dustless and has as much scouring qualities as any two scouring machines now being made.

Send for Estimates for Our Full Roller Mills of any Capacity.



The above cut shows our New Round Slow Running Flour Bolt. We also build a Cylinder or Round Scalping Reel and we have lately built a number of new mills of medium capacity, using our Roller Mills, our Round Flour Bolts and Scalping Reels, getting better results than is usually obtained.



Hutchison's New Dustless Iron Corn Sheller, especially adapted for Mill and Elevator use.

—:ADDRESS ALL CORRESPONDENCE TO:—

John Hutchison Mfg. Co.

JACKSON, . . MICHIGAN.



ELEVATOR BUCKET.

PLEASE NOTICE.

Our patents not only cover Seamless, Drawn, Stamped, Pressed or Forged Elevator Buckets; but also Pre-Date and Cover Round-Cornered Elevator Buckets when made Seamless, and are the Only patents ever issued in the World for a Pressed, Stamped, Drawn or Forged Seamless Elevator Bucket.

THE AVERY STAMPING CO.,
Successors to The Avery Elevator Bucket Co.,
Cleveland, Ohio, U. S. A.



CLAY BUCKET.



SELF-TRAMMING PORTABLE MILL

BEST GRINDING MILL MADE.

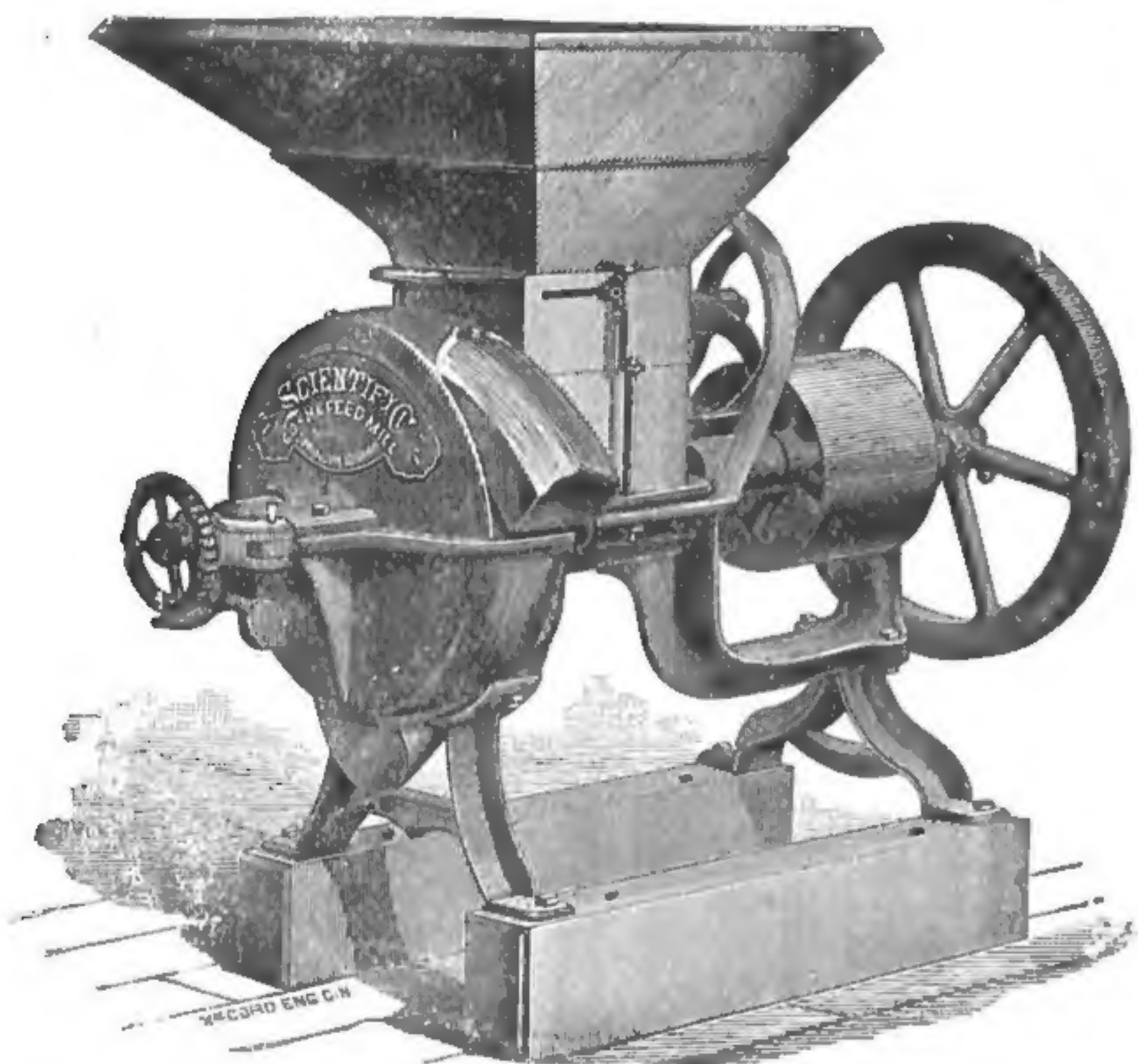
BOLTING CLOTH

CLOTHS MADE UP TO FIT ANY SIZE REEL.

BURR AND ESOPUS MILLSTONES.

SPINDLES, PULLEYS, MILL PICKS, BELTING, ELEVATOR BUCKETS
AND GENERAL MILL FURNISHINGS. FOR CATALOGUE
AND PRICES, ADDRESS

SAMUEL CAREY, 17 BROADWAY, NEW YORK



THE SCIENTIFIC GRINDING MILL.

POSITIVELY THE BEST MILL ON EARTH.

GRINDS PERFECTLY, EAR CORN, SHELLED CORN,
AND ALL GRAINS.

GRINDING PLATES A SPECIAL METAL

*Hard as Steel, Guaranteed to Grind from Five to Eight
Thousand Bushels before wearing out.*

SEND FOR ILLUSTRATED CATALOGUE, PRICES, ETC.

THE FOOS MFG. CO.

SPRINGFIELD OHIO.



STILL ON TOP.

Perhaps the HIGHEST COMPLIMENT that could be paid the "Salem" bucket is the fact that during the past few years ITS SHAPE HAS BEEN SO CLOSELY IMITATED by other manufacturers as to infringe our patented rights, but experience reveals the IMPERFECTIONS OF IMITATIONS, and we therefore take it as a FURTHER COMPLIMENT to the "SALEM" bucket that some of its old patrons who were Induced to Try the Imitations have now Returned to the Salem Bucket, thereby Acknowledging it to be the Most Satisfactory. Don't be deceived by other makes of buckets that are claimed to be "Just as Good." Insist upon having the ORIGINAL AND RELIABLE SALEM BUCKET. All legitimate Salem buckets are plainly marked with the word

SALEM

W. J. CLARK & CO., SOLE Manufacturers **SALEM, OHIO.**

THORNBURGH & GLESSNER, General Agents, CHICAGO, ILL.